# DAILY METAL REPORTER MONTHLY SUPPLEMENT SUPPLEMENT

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By L. H. TARRING London, England

DOMESTIC METAL MARKET REVIEW
WASHINGTON REPORT
METAL STATISTICS

NOVEMBER 1956

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# Two LINE Editorials

President Eisenhower says that peace and prosperity can be continued by adherence to "hard work and sacrifice", but he can't expect any such radical program as that to be popular.

An item on the sports page says that our Olympic Games athletes have Russia outclassed in the weight-lifting events. On the other hand, it must be admitted, Russia has us just as clearly outclassed in shop-lifting.

France's Foreign Minister, it is revealed, is a writer of books of fairy stories. Lots of other statesmen have similar talent, but they generally call their fairy tales state papers.

The week's most puzzling news item concerns a nudist in Arizona who was arrested for carrying concealed weapons.

A travel agency advertises that a visit to the land of the head-hunters in Borneo can be perfectly safe "if you are careful and keep cool." Yes, you must be careful not to lose your head.

Some Halloween pranksters chained a five-ton truck to the rear of a Hollywood actor's car. That's the modern version of hitching your wagon to a star.

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ASHINGTON last month generally marked time, with one eye on the national elections and the other on the latest Mideast crisis. President Eisenhower's reelection removed one uncertainty and it will be up to the Administration and the incoming Congress to cope with domestic and international problems. Any change in the defense program, of course, would affect the metal

So far, there have been no indications that the Administration considers the international situation sufficiently serious to require a step-up in the stockpiling or defense program. In fact, the day after the election, the Government freed for industry use during the first half of next year 400,000,000 pounds of primary

aluminum originally scheduled for Uncle Sam's strategic stockpile. The Government, during 1956, has deferred 800,000,000 pounds.

The Office of Defense Mobilization, which sets amounts of metals and minerals it needs for the stockpile, said no Government "call" for the 400,000,000 pounds of aluminum would be made because of strong industrial minimum demand and because the objectives of the stockpile have been met. ODM said its policy for filling the long-term objectives of the stockpile will be to buy domestically when industry demand slackens.

#### Aluminum Set-Aside

Earlier, on October 24, the Business and Defense Services Administration announced that 137,000,000 pounds of aluminum will be set aside from the total supply available in the first quarter of 1957 to fill Department of Defense and Atomic Energy Commission orders. This reserve is 9,000,000 pounds less than the amount set aside for similar orders in the fourth quarter of 1956. Officials of BDSA's Aluminum and Magnesium Division said the decrease reflects the change in military requirements.

The 1957 first quarter figure represents 14 per cent of the anticipated supply of domestic and imported primary aluminum for that period, the same percentage as for the fourth quarter of 1956.

#### Nickle Diverted To Industry

In line with the aluminum stockrile deferment, the ODM on October 17 diverted to private industry another 5,000,000 pounds of nicked originally scheduled for the Government reserve in the fourth quarter of this year. This was in addition to 20,-000,000 pounds already diverted for the quarter. This year the Government agency has diverted a total of 79,300,000 pounds of the metal to private industry; the amount taken for the stockpile is secret.

ODM also announced the Government will issue no "call" for nickel for the stockpile during the 1957 first quarter. This will be the first time since the Korean war the Government will not be in the market for nickel, according to ODM Director Arthur Flemming.

#### Nickel Scrap Export Quotas

Later in the month, however, on October 25, the U.S. Bureau of Foreign Commerce announced fourthquarter export quotas for nickel and nickel-bearing alloy scrap materials. Under the licensing policy as established for the fourth quarter, a total export quota of 500,000 pounds (gross veight) has been set for nickel-copper alloy scrap sent abroad for conversion into nickel metal and returned to this country. In the third quarter this material was not subject to quantitative export limitations.

Export license applicants are still required to certify that not less than 90 per cent of the nickel content of the nickel-copper alloy scrap to be exported, including monel metal scrap, will be returned to the U. S. in the form of nickel metal. Grindings. crushed radio tubes, skimmings and drosses containing more than one per cent chromium and slags, which are unusuable or unsalable in the U.S., now are open-ended. Previously, this type of nickel-bearing scrap was not approved for export.

A quota of 25,000 pounds has been set for the export nickel cast and rolled anodes, nickel and nickel alloy shot, and pure nickel powder. This arrount is the same as that established in previous quarters. All other nickel products remain under openend licensing.

#### Oppose Copper Scrap Export Rise

Opposition developed, meanwhile, to any increase in the fourth quarter 1956 export quotas for copper and copper base alloy scrap. At a meeting with BDSA officials, the Brass and Bronze Ingot Makers Industry Advisory Committee opposed any crease when the BDSA requested the group's advice on the proposal of exporters that the quotas be raised. An IAC member pointed out that while there exists a general surplus of copper and copper-base alloy scrap over all, there is a decided shortage of in-

get making types and grades.

Declaring that copper-nickel and other alloys containing both metals are becoming more and more in demand for shipbuilding and essential military uses, the committee insisted emphatically that priority ratings should extend to copper-nickel alloys of 3 per cent or more, instead of 5 per cent and up. Committee spokesmen said that primary nickel must be used for some of their alloys, but because of the scarcity of nickel and their inability at present to receive "DO" ratings from their customers, the ingot makers are finding it difficult to obtain adequate supplies of primary nickel.

#### Lead, Zinc for Stockpile

General Services Administration again entered the metal market to make its monthly purchases of demestically-produced lead and zinc for the national stockpile. Offers to supply both metals had to be submitted by producers by October 25, with deliveries to be completed by December 15. The GSA got only about 3,765 tons of lead when it purchased that metal for the stockpile in September; some quarters believed not much more would be offered by producers in November. Some producers were not expected to offer any zinc for the stockpile in November, with others planning to offer a little less than they did in September.

#### **ODM Stockpile Report**

The ODM disclosed it has spent \$145,000,000 for more than 600,000 tons of strategic materials for the stockpile in the first six months of this year. In it ssemi-annual report to Congress, ODM said that of the amount purchased, \$93,500,000 covered goods bought for the minimum stockpile (materials for immediate use in event of war) and \$51,500,000 for the long-term stockpile. Since 1945 the Government has accumulated \$6.000,000,000 worth of critical and strategic materials weighing 000,000 tons and stored in 242 locations.

The barter of U. S. surplus agricultural commodities for strategic materials now represents the largest single Government source of such materials, ODM said. Commodity Credit Corp. inventories of strategic commodities acquired through barter have a value of \$162,000,000, and the corporation has outstanding orders for an additional \$330,000,000 worth of materials.

#### Farm Barter Program Purchases

The Agriculture Department reported it contracted to barter \$64 .-280,000 of Government-owned farm commodities for an equal value of strategic materials from abroad during the July-September quarter of

(Continued on page 19)

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# FURTHER STEADY RISE LIKELY IN WORLD'S COPPER NEEDS WITH SUPPLY INCREASING, PRICES STABLE

Overall Demand by 1965 May Be Expected to Reach 5.1 Million Tons, 46% More Than Last Year; Soviet Union May Again Become a Factor in Market

By ROBERT P. KOENIG, President, Cerro de Pasco Corporation

DURING the first decade, following World War II, the global economy has expanded at a rate unparalleled since before the first world war.

#### Increased Demand For Primary Products

The rapid growth of the world economy over the past ten years has generated an intense demand for industrial raw materials, but - and this is one of the major lessons of the period - it has not generated a demand proportionate to the rate of overall economic advancement. Thus, while world manufacturing output doubled between 1938 and 1955, this expansion in the consumption of metals derived from ores - and an expansion of only just over 30 per cent in the usage of virgin copper ore. And even this dramatic contrast underestimates the full extent of the divergence, since the expansion of the world metal-using industries has been even greater than that of world manufacturing output.

How, it may be asked, has it been possible to achieve this very significant increase in world manufacturing output with a much smaller increase in the production of metals? The factors most responsible for the divergent trends are probably these:

First, the prices of most metals have risen very substantially indeed since the 1930's, much more, in fact, than the prices of manufactured goods. As a result, scrap metal has become a highly-prized commodity. Its collection and re-usage is a considerably more organized and profitable business than it was before the

Secondly, manufactured products are, in general, much more complicated articles than they were twenty years ago. Consequently, the manufacturing industry uses less raw material (and more capital) per unit value of output than in the 1930's. Automobiles, aircraft, machine tools are all good examples of this tendency.

Finally, technological development over the past decade has resulted in substantial economies in the usage of raw materials. In addition, the increasing use of synthetic materials has curtailed the consumption of a number of primary products.

We can, I believe, reasonably expect that these same factors will operate over the years ahead. It is true of course that scrap collection in the more developed areas of the world cannot be expected to become appreciably more efficient, but in the underdeveloped countries, scrap collection should become more important as time passes.

#### Population Growth and Industrial Expansion

Allied with the rapid expansion of the world economy is the remarkable increase in world population. Since 1900 the total world population has increased by 65 per cent and is currently expanding at the rate of 25 million or 1 per cent a year. It is estimated that on present trends world population by the year 2000 will reach some 3 billion, 250 million.

One of the most dynamic factors at work today is the astonishing increase in electric power generation. Between 1937 and 1955 the production of electricity expanded by no less than 220 per cent, or at an average annual rate of nearly 12 per cent, far outpacing the increase in world population or industrial growth.

There is every prospect that electric power production will continue to expand at least at the present rate — a most powerful support to the world copper market.

It is often suggested that copper usage tends to follow larger trends in steel production. World crude steel production (excluding the Soviet Union) totaled 87 million tons in 1935. In 1955 it reached an estimated 261 million tons — an expansion in twenty years of 200 per cent. This rate of production far outpaces the increase in copper production over the same period, and to this extent our analogy is a false one. But to the extent that steel output underpins the whole of modern industrial growth, the parallel is very real. The connection between steel consumption and copper usage is not direct, but the two are connected in a highly significant way.

#### Future Economic Prospects

The major query troubling economists — and businessmen — is whether the impressive burst of the past decade will be kept on.

I will promptly place my own cards on the table and declare my belief in the future of the expansionary world. I shan't take your time to outline in detail the articles of my faith. But, in brief, the "growth supporting factors" in the world economy seem to me sufficiently strong that collapse may not occur again in our time. Governments of all the leading nations of the world are committed to full employment policies - and, what is more important we are hopeful today that we know the way to cure (indeed prevent) certain major slumps. Economic manipulation of the economy to ensure the optimum level of effective demand is now a finer art than it was at, say the beginning of the century. Moreover, the elements of "built-in" stability in the world economy - resulting from a constant flow of expenditures unrelated to business activity - are considerably more persuasive than in the pre-war era.

If these considerations represent anything like a true forecast of the future, it looks well for copper. Special factors will be bearing on the metal which I should next like to review with you. But my basic thesis

Excerpts of address before Regional Conference of New York Society of Security Analysts, Waldorf Astoria Hotel, New York City, November 8, 1956.

thus far is that the underlying growth trend will be buoyant.

#### Future Rates Of Growth

World industrial production expanded by 50 per cent between 1948 and 1955, and will in all likelihood continue to expand substantially, albeit at a slightly slower rate, between now and 1965. A reasonable estimate is that world industrial production will rise by a further 40 per cent over this period (a rate of growth very much in line with that suggested by The President's Materials Policy Commission — The Paley Report).

We have already noted the extremely rapid rate of growth of electric power generation in the post war decade. There is every reason to expect that such expansion will continue during the 10 years ahead—indeed there is a real possibility that the rate of growth may be speeded up. However, even on a reasonably conservative estimate, world production of electric power will increase to 3 billion, 350 million kilowatt hours, or 150 per cent above present levels, by 1965.

World steel production has expanded by some 10 per cent a year since before the war, and there are massive expansion programs being considered and under way. On the basis of the general growth considerations previously discussed and on the projected expansion of capacity, an estimate of an increase in steel production by 60 per cent over the next decade may not be far wide of the mark. This would imply a level of steel output of 350 million short tons by 1965.

Free World copper consumption has expanded by nearly 35 per cent since 1948. In the light of the foregoing considerations, an increase in consumption of approximately the same amount, that is, an expansion in usage from 3.5 million short tons to 4.7 million short tons may be expected by 1965. The growth factors already considered are general ones, however, and there will be very special factors impinging on copper usage over the next few years, each of which may be expected to exert a more profound influence than it has done in the past.

#### Prices, Availabilities and Substitutes

One of these, the substitution of aluminum, plastics and other materials for copper may continue to work against the older metal, although the other two — (2) the dynamic nature of many of the copper using industries (and some very dynamic ones have joined the list in recent years) and (3) the impact of defense requirements with the power-

ful effect that stockpiling seems to exert — will move in its favor, and very strongly so.

A good deal has been written and said lately about the encroachment of aluminum, plastics and other substances into the field traditionally occupied by copper. There is of course a tendency for such changes and innovations to reach the headlines while conventional processes go largely unnoticed, but evidence suggests that the extent of any move away from copper has been rather more than marginal as some have argued.

The reasons for this are (1) because the metal has not always been easy to obtain in the past, and even more important, (2) because its price has shown swings of alarming amplitude and frequency, and has further tended to fluctuate around high rather than low levels. The second point is of course largely dependent upon the first. And whether or not these trends will continue in the future depends upon the future price and supply relationships between copper on the one hand and its competitors on the other and the speed with which the limitations of the substitutes can be overcome.

The history of the recent past gives little encouragement to forecasting copper prices. At all events, the prewar relationship between the prices of copper and aluminum are unlikely to be re-established.

#### Prospects For Improved Copper Supplies

With respect to copper, unless there is a deterioration in the labor position in the copper producing areas — and such problems tend to be short-term rathan than long term ones — the supply situation should indeed show an improvement in the long run, for strenuous efforts are being made to expand output in the copper regions of Africa, South America and elsewhere.

Furthermore, there seems to be a growing awareness of the lasting damage to copper's prospects which can be wrought by an unbalanced price structure. The most striking testament to this is the Rhodesian Selection Trust's adoption of a fixed price, or a series of prices fixed for periods. This has by no means met with universal agreement, although the purpose — to avoid an adverse effect on copper consumption in that range of uses in which demand is elastic — is not disputed.

In any case, it is not suggested that copper is replaceable in all, or even a large proportion, of its uses. In the first place, it is often employed in comparatively small quantities in each individual product, so that the saving to be gained by using another substance in place of copper may be small. In other cases where the copper content is large, as in switchgear, for example, the final product is so costly as to minimize the effect of an increase in the copper price on the final selling value.

Finally, for many goods, as for example in the electrical field and in marine use, there would appear little likelihood of copper losing much ground.

#### Copper's Unique Qualities

The prospect of some improvement in the stability of copper prices and supplies relative to other materials which have tended to take its place, the limited range over which substitution is possible, the inherent qualities of copper and its alloys and the technical problems involved in using alternatives - all these will tend to restrict the degree to which copper is replaced in future. Most probably this will not greatly exceed the replacement rates of the past. It is impossible to measure this displacement, but it would be surprising indeed if it were to even approach the annual gain in the potential outlets for copper. Overall consumption is thus certain to increase absolutely if not relatively to the movements in the basic underlying forces.

#### Dynamics Of Copper-Consuming Industries

The second of the three prime influences on copper consumption — the dynamics of the industries using it — suggests previous growth rates should be fully maintained — and even improved upon. Most of the present industries using the metal exhibit fairly strong growth characteristics and several powerful copper users — atomic energy is one example — have been recently added to the list.

Taking copper in all its forms, almost half the world's consumption of copper goes into various electrical uses.

About another fifth is believed to find its way into shipbuilding and the associated engineering industries.

Motor vehicles absorb about a tenth. Building construction absorbs appreciable quantities, approximately another tenth of the total. And because the modern age requires a high level of defense expenditure, copper or brass is required for ammunition and other equipment. These are the main uses which account for perhaps ninetenths of world consumption. In addition, of course, significant quantities are absorbed by the railways,

(Continued on page 14)
METALS, NOVEMBER, 1956

# RESEARCH MAY INCREASE AVAILABILITY OF 'RARE' METALS AND SPARK NEW INDUSTRIES OF TOMORROW

Cites Aluminum, Magnesium and Titanium as Once Relatively Obscure But Now Economically Important; Further Technological Advances Seen Vital

By EUGENE B. HOTCHKISS, Vice President, Vitro Corporation of America

W E quite customarily speak of these substances - which I shall call simply the rare metals as though they belonged together by virtue of similar characteristics or properties. Even an inference of uniformity is hardly excusable in this age of scientific exactness, for individually the rare metals have very little in common. They aren't even all "rare". They differ widely in the prevalence in which they occur in nature. Some, common in other parts of the world, are promoted to the rare category in our country, mainly because of their strategic importance. Their value per pound ranges from cheap to very expensive; some rare metals are produced on a large scale, others by the gram. To further compound the confusion of nomenclature, we include in this group the metalloids, with properties somewhere between those of a true metal and a non-metal, the rare earths, which are neither truly rare nor are they earths, and those new manmade elements that are produced by nuclear reaction and the trans-uranics.

Perhaps some justification for this blanket classification may be found in their very diversity; perhaps more in our attitude toward them that sees unmeasured potentialities in their future. A kinship of fascinating dissimilarity bonds these unusual metals together. In common, they stimulate our technical curiosity in the search for newer and better materials. Collectively, they represent the promise of the future in the metals industry.

Therefore, I propose that we borrow a term of scientific distinction used to designate other congeries of diverse talents, and call this group hereafter the College of Rare Metals, and I nominate for membership the following, as listed in the table on this page.

I will not ask that these nominations be seconded, neither will I request that the nominations be closed, and I hasten to add that this selection of some 65 of the 101 presently identified elements in the periodic table has not been passed upon, or approved by any committee. It is my own selection and admittedly arbitrary.

#### So-Called Rare Metals

Let us briefly examine some of these so-called rare metals.

Berkelium

Curium

Californium

Neptunium

Plutonium Einsteinium

Fermium

Mendelevium

In prevalence, silicon, second only to oxygen as the most abundant element, makes up some 28 per cent of the earth's crust. But pure silicon is produced at the rate of only a few thousand pounds per year. The rare metal, tungsten, is about as abundant as copper. There is almost twice as much zirconium in the earth's crust as zinc, and one is amazed to find rubidium, 16th in order of prevalence, almost as abundant as chlorine, but with a total annual production of only about 100 pounds.

On the lower end of the prevalence scale, thallium occurs in the lithosphere to the extent of about 30 grams per ton, and although it is more abundant than arsenic, antimony, or mercury, its wide distribution does not represent its availability. Rhenium, occurring in the earth's crust to the extent of only one thousandth of a gram per ton, is indeed rare, while the manmade metals like promethium, produced only by nuclear reaction, do not occur in nature at all.

#### Physical Differences

In physical properties there are also some striking differences. Thallium is so soft it can be easily scratched with the fingernail. Gallium will literally melt in your mouth, going into its liquid phase at some 13° F. below normal body temperature. At the other end of this scale stands osmium, the hardest of all metals, and tungsten having the highest melting point, 6152° F.

The electrical properties of the rare metals are equally interesting. Boron, a feeble conductor at room temperature, becomes quite conductive at high temperatures. Vitreous selenium is a dielectric, while in one of its other allotropic forms it is a good conductor. Germanium owes its important use in transistors to the fact that it is a semi-conductor, and recent reports indicate lanthanum, one of the rare earths, is a super-conductor.

#### Age Variations

Variations in age are notable, too. The mineral, beryl, was mined as a gem in Egypt five thousand years ago, but the metal beryllium, the lightest stable metal with a high melting point, was not known until late in the nineteenth century. Osmium, the heaviest of all metals, was found in the native state with others of the platinum group in precious metal brought back by the Conquistadores in the mid fifteen hundreds. Mendelevium, first produced a little

#### COLLEGE OF RARE METALS

Platinum Group (Continued): Beryllium Bismuth Rhenium Boron Rubidium Cadmium Scandium Cesium Selenium The Alkali Earth Metals: Silicon Calcium Tantalum Barium Tellurium Strontium Thallium Cobalt Thorium Columbiam Tungsten Gallium Vanadium Germanium Yttrium Hafnium Zirconium Indium The 15 Rare Earth Metals. Lithium The Manmade Metals: Manganese Francium Molybdenum Promethium Astatine The Platinum Group: Technetium The Trans-Uranics: Iridium Osmium

Address presented before American Mining Congress, Les Angeles, Calif., October 4,

METALS, NOVEMBER, 1956

Palladium

Platinum

Rhodium

Ruthenium

over a year ago, certainly qualifies as the youngest rare metal, but its half life is so short that it will undoubtedly pose some unique membership problems in the College of Rare Metals.

In the interests of brevity I shall not even attempt to catalogue the infinite variety of their chemical properties or their nuclear behavior. These, then, are our rare metals.

These, then, are our rare metals. We have mentioned only a few and our examples were selected primarily to illustrate diverse and unusual properties. Old or new, rare in occurrence or rare in use, hard, soft reactive, or passive, they represent a most unusual collection of substances, richly deserving the distinction and honor of membership in the College of Rare Metals.

But fascinating as they are as rare metals, the future promise of those we can coax out of their obscurity into the profitable service of mankind commands a much more practical interest. It is as common, rather than rare, metals that they will spark the new industries of tomorrow. Can we determine the factors that are significant in their transition from rarity to availability? Can a pattern be detected in the transition of recently available but once rare metals such as aluminum, magnesium, or titanium that might help us to predict when and how others might join these illustrious alumni of the College of Rare Metals?

#### **Economic Factor**

We can list several factors that were significant in the change of these three light metals from relative obscurity to economic importance:

1. The recognized need for new strong, lightweight structural metals; 2.. The abundance of each of these three in the earth's crust that stim-

vlated a desire to put them to use; 3. The assurance that a large and profitable market awaited the successful solution of the problems of process technology and fabrication.

How did these factors operate in the case of aluminum? About 35 years of research and process development followed the first laboratory production of the pure metal before Hall achieved his technological breakthrough that demonstrated how aluminum could be produced economically. We do not know the cost of this effort, but it is of interest that the research, application engineering, and market development, which followed each other in orderly fashion, were solely the efforts of private risk-taking in an atmosphere of free enterprise and peace.

#### Magnesium Industry

The story of magnesium differs from that of aluminum. The magnesium industry was a German monopoly imported to this country under the threat of World War I. Judging by U. S. production, which languished around a few hundred tons per year until there was a sharp rise in the early 30's, the problems of process technology were not solved until then. But in magnesium, the factor of need was heavily underscored by war-time strategic requirements, which, heavily backed by Federal subsidy, created a

tremendous demand before industry was technologically ready to supply it

The process breakthrough had hardly occurred before the defense program of World War II expanded magnesium production manyfold, from 5,300 tons from one plant in 1939 to over 180,000 tons from 15 plants four years later. At the end of the war one plant was again the sole producer. I have been unable to find records of the total Federal spending on magnesium, but we may assume that it was substantial.

The titanium industry got off to an even faster start than magnesium in another period of emergency, and under the direct initiative of the government. A much more imposing array of government spending programs appeared. Again we see the factor of strategic need for a little known metal causing a crash procurement program well in advance of the breakthrough that normally process signals the start of a new extractive industry. It is estimated that the total cost of this program to the government, including government-financed research in processing and production, plant loans, the maintenance of production aids, together with G. S. A. stockpile purchases, totaled somewhere around 175 million dollars.

#### Long Research Programs

As far as a pattern is concerned, we can note that in each of these examples, the difficulty of extracting the metal from its ore, or source, and in fabricating it into useful forms, disputed the promise of its prevalence in nature. And in each case, a costly, arduous, and long research program had to be successfully completed before the metal became an article of commerce.

By no means should we deprecate the widespread industrially-sponsored activity that took place concurrently, nor can we deny that our economy will be enriched by the availability of this new light metal much sooner than would have been the case without vast government support. But in the case of magnesium and titanium we might raise the question whether the development of our newer metal industries must of necessity occur in an atmosphere of national urgency and be dedicated first to the destructive arts of war.

#### History of Uranium

We can look at some other examples. Without doubt the history of uranium illustrates the ultimate effect of the forces of extreme national urgency, brought on by world war and continued by an unsettled peace. Never before has our national security been so thoroughly tied to a single metal, which a short decade and a half ago was known as a little wanted by-product of radium refining. The immense problems of scarcity, lack of basic knowledge of its properties, and the gravest question of all — whether its predicted behavior could be safely demonstrated and controlled — were far beyond the capabilities of private enterprise to handle.

Under a time schedule that appeared impossible, and the necessity of the most stringent security con-

trols, there was no other way of creating this industry except as a ward of the government. The cost, exclusive of weapons development and production, has been estimated to be in the neighborhood of 14 billions of dollars — the cost of 80 titanium programs.

We may hope that this example does not indicate a pattern to be followed in the case of other rare metals, but it brings home forcibly the vital necessity, as well as the immense cost, of the research, process engineering and solving of many complex metallurgical, chemical, and fabrication problems that were involved in the development of this new metal industry.

#### Private Initiative

Molybdenum is one of the relatively few new rare metals, now established as an industry, in which pricate initiative in research outpaces Federal subsidy. The Bureau of Mines says.—

says, —
"At least part of the spectacular growth of the molybdenum industry can be attributed to research sponsored by the producing firms."

We can cite two more examples: beryllium, where private initiative has been particularly active; and zirconium, where Federal leadership is more apparent. In both cases, recent government procurement contracts for many times the present productive capacity of the industries involved have caused a flurry of competitive bidding and crash development of new processes.

We certainly cannot object to the aspects of competition in technological development, or its effect on prices, and the plans of the zirconium producers and quite possibly those making beryllium, as well, to produce quantities in excess of government requirements, will certainly advance the industrial importance of these metals. But when a new business, or one about to be vastly expanded, has only one customer, whose requirements are dictated primarily by military considerations, we may ask ourselves again — must the peacetime uses of our new rare metals always be a by-product of their strategic war-time need?

#### Further Progress Vital

In the present state of international nervousness, it is hard to plan effectively for the less critical times we hope for in the future. We must never forget that industrial strength is our nation's best guarantee of peace and the strongest deterrent to potential aggressors. We should of course continue stockpiling those scarce materials on which our productive capacity depends, and intensify the search in our own country for the minerals we might not be able to obtain from abroad in time of war. In fact, further progress in all of the technologies that might make us invincible in ware is vital.

But neither should we forget that many of these same objectives can also be accomplished by research and development dedicated to the objectives of making available more and

(Continued on page 19)

#### **BUSINESS IN MOTION**

# To our Colleagues in American Business ...

If you process clay, crushed stone, iron ore, coal, foodstuffs or potash and similar chemicals, where screening is part of the operation, then you know that the screen can be vibrated as much as 3600 times per minute. This means every part must be able to take a terrific beating constantly. It has been found that by heating the screen electrically the surface tension is removed from each and every wire of the screen cloth so that even damp or moist material will not "blind" the cloth opening.

One of those heater parts is an extruded copper shape that runs along either side of the screen. At the point where the extruded shape meets the wire a positive electrical contact must be maintained at all times. So the bar must be non-porous, free from any burrs or voids and capable of maintaining a straight leading edge. Also, the bar must carry 1500 amps. at 5 volts. The country's leading manufacturer of these screen heaters had experimented with many different types of material. A copper casting was selected to do the job. But it was

found on installation that the 60" castings required additional welded joints, presented a porosity problem, and the bow in the casting made it difficult to fasten the screen firmly to the contact.

After discussing the problem with one of Revere's TA's (Technical Advisor), it was suggested that a Revere Copper Extruded Shape be used instead of the casting. It was furnished in 12 foot mill lengths. This offered flexibility and eliminated both welds and scrap. The extrusion licked the porosity problem, and its straightness was superior to the casting. Also

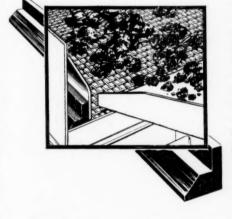
it gave better longitudinal electrical contact. The cost per foot of the extrusion was more than the casting, but the additional welds and scrap encountered made the final installed cost of the casting higher. In addition the finished extruded shape was superior. Another case where spending a little more initially resulted in an ultimate saying and a better product.

The Vice President and General Manager of the company using this Revere Copper Extrusion com-

> mented, "Without the use of an extruded electrical conductor it would be virtually impossible to maintain satisfactory operating results under the trying conditions which exist in the field. But with this shape we are able to install an electrical heating attachment with complete confidence that it will provide many years of maintenance-free life, at the same time helping our customers produce a better product. This extruded conductor, subject to electrical strain and abrasion from materials moving across the screen, has in many cases provided the electrical heating circuit

in the production of 1½ million tons of raw material without a single replacement."

While the product noted here happens to come from Revere, there are equally outstanding performances turned in by materials furnished by "Our Colleagues in American Business." For that reason we would like to suggest that you get to know your suppliers better. It's entirely possible that a meeting of the minds would result in a better product at less cost by getting the exact material for the job.





#### REVERE COPPER AND BRASS INCORPORATED

Founded by Paul Revere in 1801

Executive Offices: 230 Park Avenue, New York 17, N. Y.

#### **U. K. METAL PRICES STRONGER ON MIDEAST CRISIS**; MARKETS DOMINATED BY POLITICAL DEVELOPMENTS

No Change in Government Stockpile Copper Disposal Plan; Continued Tin Stringency Seen by Canal Closing; Barter Buying Firms Lead, Zinc

November 6, 1956 FOR the greater part of October the copper market continued to present a rather dull and easy appearance. Consumer demand in Europe failed to revive to the extent that had been hoped for the autumn, and with even the American market obviously moving into an easier supply position than for some considerable time, quotations on the London Metal Exchange sagged, at one time dropping to £263 a ton.

The U. S. custom smelters, who followed the broad London trend, brought their quotations down to 35 cents per pound. The U. S. primary producers found it impracticable to maintain quotations at 40 cents, and cut them to 36 cents. Phelps Dodge and Anaconda at the same time announcing some cut-backs in their domestic production, which indicated that a determined effort would probably be made to hold U. S. domestic prices steady at this level.

Similarly, in the U. K., the Rhod-

Similarly, in the U. K., the Rhod-esian Selection Trust, under a certain amount of pressure, it is believed, from its principal consumers, was forced to reduce its quotation to its main U. K. buyers, first to £280 a ton (the figure at which its price pegging began) and subsequently to i.f. U. K. electrolytic wirebar £265 c.i.f. U. K. electronic on October 24.

Editor's Note: The RST price was increased £15 a long ton to £280 a ton on November 12.

There appeared to be some signs of the market settling down at the lower level, although interest on the part of consumers both in the U. K. and on the Continent of Europe was slow to revive.

#### Middle East Developments

Then came the Israeli advance into Egypt and the Anglo-French demarche to stop an Egyptian-Israeli war and to protect the Suez Canal, and not surprisingly there was a sharp revulsion in sentiment with prices shooting up temporarily to practically £300 a ton again. This level, however, was only temporary, although quotations did not relapse to their former level.

At the time of writing the market is still very much under the domination of political influences which have been seriously aggravated in the last few days by the vigorous military action taken in Hungary by the U.S.S.R.

At the present time it is quite im-

By L. H. TARRING London, England

#### RST PRICE CHANGES

Changes in the Rhodesian Selection Trust's fixed electrolytic copper price, since it was established on May 9, 1955, and applicable to the RST's regular customers in the U. K..

	Pounds Sterling (Long Ton)	Equivalent in Cents Per Pound
Date Of Change		
1955		
May 9	. 280	35.00
August 2	. 325	40.625
September 5	. 360	45.00
1956		
February 27	. 385	48.125
April 30		43.75
May 28		40.00
Jene 18		37.50
July 2		34.375
August 1		37.50
October 15		35.00
October 24	. 265	33.125
November 12		35.00

possible to take any reasoned view of the probable outlook for copper, and indeed any other strategic com-modity, until the political situation becomes a great deal clearer than it is at the moment. It could be argued that the effect on prices of the latest political developments in Europe and the Middle East has been smaller than might have been expected, and apart from a temporary spell of covering buying mainly from the Continent, it cannot be said that any very large scale demand for copper so far seems to have been generated.

This, no doubt, is due to the fact that consumers generally seem to be

reasonably well stocked and arrivals in Europe are not likely to be directly affected very seriously by the loss, for the time being, of the Suez Canal as a sea route.

Despite the events of the last week or two and very grave potential implications, there has been no indication that the Government here has altered its policy with regard to the disposal of 36,000 tons of stockpile copper for the next five months, tenders for half of which were received on October 26.

#### Powerful Impact on Tin

In the early part of October the tin market wore quite a firm appear-ance due to the fairly strong statistical position, which had been envisaged, but which nevertheless meant that supplies of spot metal at most of the consuming centers were definitely on the short side.

In these circumstances, it is hardly surprising that the outbreak serious trouble in the Middle East had serious trouble in the Middle East had a powerful impact on the market and in fact, during October tin prices moved by more than £100 a ton from about £773 up to a peak of £890 immediately after the Israeli invasion of Egypt. Subsequently quotations receded a little from the top, but political developments have lifted the market roughly £100 above the level pre-vailing only a few weeks ago.

As the diversion of ships from the East via the Cape will obviously de-lay the arrival of tin afloat and to be shipped, the premium on spot metal has rapidly increased and there is currently a backwardation of some

U. K. COPP

Stocks of both refined and blister copper in the U. K. at the end of August showed an increase over the end-July figures at 55, 553 tons (of which 36,723 tons held by consumers and 5,118 tons in London Metal Exchange approved warehouses) and 16,516 tons compared with 51,975 tons and 16,222 tons respectively. Imports into the U. K. during August were 8,642 tons of blister and 24,414 tons of refined, and production of primary refined was 6,012 tons and 5,748 tons of secondary refined and 657 tons of blister. Consumption was 30,065 tons of refined; full details as reported by the British Bureau of Non-Ferrous Metal Statistics are given below:

low:	Aug.	Jan	Aug.	
	1956	1955	1956	
UNALLOYED				
COPPER				
PRODUCTS				
Wire (1)	16,136	147,055	157,366	
Rods, Bars & Sec-				
sections	978	11,914	13,183	
Sheet, Strip & Plate	3,175	40,769	37,583	
Tubes	3.487	32,124	34,637	
Castings & Misc.	650	4,000	5,200	
ALLOYED				
COPPER				
PRODUCTS				

	TOTAL ALL PRODUCTS	47,044	523,443	520,719
	Copper Sulphate	2,622	25,720	33,026
	Castings & Misc	5,311	45,790	50,661
	Tubes	1,308	14,420	14,823
	Sheet, Strip & Plate	5,060	89,327	77,565
	tions	7,336	100,184	84,761
	Wire	981	12,140	11,91
R	STATISTICS	001	10.710	** **

since monthly figures of scrap consumption are affected by variations in the amount of work in progress.

#### AVERAGE BRITISH PRICES FOR COPPER, TIN, LEAD, ZINC

(Per Long Ton)

	Mea	n e	of	Bid			sked ER	Cas	h (	Quot	ation	1 8	it (	Close			rning			ion o	n i		don :						NC —		_
			Cas	h			ths	Sett	len	ent		as	h	3 M			Settl			Curr				ird		Cur		t		rd	
1954 Average 1955 Average		248	8. 17	11	239		d. 7 3	£ 249 352		11	£ 719 740	8	d. 11 12	709	17		£ 720 740	6		98 105	8.	d. 12	£ 94 105	s. 7	d.	£ 78	s. 5 13	d.	77		d. 11
January February		392	2 4	7			10	392 404		1 10	814 805	4	4 6	788 774		2	815		11	118	11	4	116 115			100			97		2
March		374	11	8	369	0 0	6	420 375	0	6	805 764	10	9	780 759	17	6	807 764	8 17	7	121 115 111		3	118 114 109	13 18	11	101 98	11	10	98	13	11 2
June July		296	5 17	0	326 298 284	3 6	2	333 297 285	4		748 742 749	3	10		19		749 742 750	15	3	115	4	6	111	1	5	94	0	1	92 92	6	10
September		303	2 13	9		3 19		304 303 282	0	6 9	769 788 805			780	9	3 0	770 789 806	11	0	116 117 115	3 9	-	114 115 113	2	11 3	95 96 95		11	94 94 93	5	9

£50 a ton on the London Metal Exchange. There has been, naturally, a fair amount of buying interest, particularly for nearby positions, from consumers on both sides of the Atlantic anxious about their supplies of metal, but demand has been on the whole quite orderly.

Obviously political considerations are likely to dominate the market for some little time to come as events in Hungary are not a helpful feature, although these are of general application rather than of particular significance so far as tin is concerned.

It is also fairly obvious that whatever happens politically, shipping wil! continue to be diverted round the Cape for some while in view of the action which has been taken to block the Suez Canal, so that all indications point to a continuing stringency in supplies for the next few months, unless the U. S. Government should decide to release to the market some of the metal which is currently being absorbed into the stockpile.

#### Lead Reacts Strongly

The lead market, in common with others, suffered a fairly sharp revulsion of sentiment with the fresh

#### U. K. LEAD STATISTICS

According to figures received from the British Bureau of Non-Ferrous Metal Statistics, there was only a slight difference in stocks of Lead in the U. K. at the end of August — 23,834 tons of imported virgin and 11,959 tons of English refined — compared with 24,394 tons and 11,038 tons respectively at the end of July. Of the August totals 14,025 tons of imported virgin and 6,435 tons of English refined were held by consumers and 572 tons of imported virgin were in L.M.E., approved war-houses. Imports during the month totalled 11,583 tons and production was 8,245 tons. Consumption amounted to 12,143 tons of imported virgin and 7,069 tons of English refined as detailed in the following table:

ing table:	Aug.	Jan	Aner
	1956	1955	1956
Cables	6.913	68,842	71,638
Batteries-as metal	1.721	19,476	18,498
Battery Oxides	1,662	18,755	17,610
Tetraethyl Lead	1,975	14,130	13,855
Other Oxides & Com-			
pounds	1,736	17.722	16.544
White Lead	701	7,316	7,009
Shot	251	3,066	3,006
Sheet & Pipe	6,058	51,291	48,729
Foil & Collapsible			
Tubes	317	3,311	3,325
Other Rolled & Ex-			
truded	569	5,500	5,209
Solder	934	8,967	9,155
Alloys	1,298	10,568	11,139
Misc. Uses	942	8,929	8,204

CONSUMPTION .	25,077	237,873	233,920
of which:			
Imported Virgin Lead	12,143	135,404	114,285
English Refined	7,069	44,366	55,442
Scrap including re-			
melted	5,865	58,103	64,193

METALS, NOVEMBER, 1956

U. K. TIN STATISTICS

U. K. TIN STATISTICS

Stocks of tin in the U. K. at the end of August at 2,451 tons (of which 1,451 tons were held by consumers and 1,000 tons in L.M.E. approved warehouses) showed a considerable drop over the 3,460 tons in stock at the end of July. Figures issued by the British Bureau of Non-Ferrous Metal Statistics show imports at only 20 tons and production at 1,931 tons, both as decreases compared with previous two months. Consumption, full details of which appear below, was 1,573 tons.

Aug. Jan.-Aug.

	Aug.	Jan/	
	1956	1955	1956
TINPLATE	631	6.569	6,371
TINNING			
Copper Wire	28	351	319
Steel Wire	6	75	70
Other	58	533	
TOTAL	92	959	913
SOLDER	232	1,577	1,941
ALLOYS			
Whitemetal	256	2,526	2,288
Bronze & Gunmetal	198		1,819
Other	31	305	304
TOTAL	485	4,439	4,400
WROUGHT TIN (1)			
Foil & Sheets	25		185
Collapsible Tubes	27	271	225
Pipes, Wire &			
Capsules	4	31	30
TOTAL	56		440
OHEMICALS (2)	67		661
OTHER USES (3)	10	88	83
TOTALS	1,573	14 840	14,817

Notes: (1) Includes Compo and "B/Metal. (2) Mainly Tin Oxide. (3) Mainly Powder.

Middle East crisis and the troubled political conditions in Hungary. Previously, with consuming demand in Europe rather dull and a sufficiency, though no surplus, of supplies available, prices had a rather sagging tendency.

The virtual closure of the Suez Canal, however, involving the diversion of shipping round the Cape, is obviously bound to interfere with supplies to this country and the Continent to some extent, and in view of the fact that any surplus metal in Europe had been taken off the market by American barter transactions, this caused a bit of a scramble to cover bringing prices here up to £118.15.0. at one time, or very close to parity with the U.S. domestic quotation after deducting the duty.

This level of prices was not quite maintained, but in view of the extremely obscure outlook at the present time, users are naturally concerned to keep themselves as fully cov-ered as possible, and this lent some strength to the market and presumably will continue to do so until or unless the political outlook improves.

Imports of pig lead into the U. K. this year have been well below 1955 levels and have dropped more sharply than has actual consumption so that obviously reserves within the country are not large though so far there is no indication of any user being unable to satisfy his needs.

#### Zinc Tone Firmer

The movement of zinc and zinc concentrates to the U. K. and Europe, particularly from Australasia has obviously been affected to some extent by developments in the Middle East. and this, coupled with the absence of any substantial reserves in Europe. has resulted in a definitely firmer in the market following the Israeli invasion of Egypt.

So far, strategic demand for metals has not developed on any very large scale, but should it do so, zinc will obviously be affected, and this obviously be affected, and this may also be a factor in helping to strengthen sentiment.

Meanwhile, actual consumption both here and on the Continent has been jogging along on only a moderate basis, but so much metal was taken from Europe by U. S. barter transactions that there is little reserve to call on, and it is even reported that some buying on the open market here represented covering purchased against sales made to the U.S.A.

The further outlook is completely obscure pending some clarification of the political outlook.

U. K. ZINC STATISTICS

The British Bureau of Non-Ferrous Metal Statistics reports an increase in stocks of zinc in the U. K. at the end of August compared with end of July at 51,946 tons (49-169 tons). Of the August total, 22,616 tons were held by consumers and 3,067 tons were in London Metal Exchange approved warehouses. Imports during August totalled 10,185 tons and production was 6,223 tons of virgin Consumption, full details of which are given below, was 18,791 tons of virgin and 381 tons of remelted and scrap. below, was 13,732 con-of remelted and scrap. 1055 1056

	1330	1399	1330
	Aug.		Aug.
Brass	5,732	79.547	70,951
Galvanising	7,277	70,758	69,872
of which:			
General	2,410	22,720	22,850
Sheet	2.152	22.715	20,661
Wire	1.636	14 602	14,132
Tube	1.079	10.721	12,229
Rolled Zinc	1,269	14.424	15,238
Zinc Oxide	1.476	20.355	17,950
Zinc Diecasting &			
Forming Alloy	1.556	26.577	22,669
Zinc Dust	609	7,187	6.063
Misc. Uses	948	8,010	7,867
TOTAL			
	10 000	226,858	210,610
ALL TRADES	18,867	226,858	210,610
of which:			
Slab Zinc High Pur-			
ity (99.99%)	1,905	28,757	26,474
Electro & High Grade			
(99.95%)	3.633	42,142	40,809
Prime Western g.o.b.			
& debased	8.253	93,647	82,957
Remelted Zinc	381	3,778	3,657
Brass & other copper			
alloy scrap (zinc			
content)	2.351	34,483	33.184
Scrap zinc metal,			
alloy residues etc.			
(zinc content)	2,344	24,051	23,529
			13

#### Further Steady Rise Likely in World's Copper Requirements

(Continued from Page 8)

aircraft, oil refining and the engineering industries.

Finally, coins, building hardware, screws, eyelets, etc., go to make up a miscellaneous, but nevertheless important group.

#### Prospects For Increased Copper Demand

The future growth rate of copper demand will obviously depend on the future prospects in each of these consuming industries and any changes that might take place in the use of copper and allied substances within them.

Broadly speaking, the progress made by the electrical industries is geared to the rate at which electrical demand grows. So far this century, for the United States and Britain at least, electricity consumption has doubled every decade and, taking the world as a whole, there seems little reason to doubt that rate can be continued. With the development to be carried out in backward areas and the dynamic force of atomic energy, it may well be exceeded.

Other factors supporting the long term growth in the "electrical" uses of copper are increased electrification of the steel industry (electric furnaces and rolling mills), and the general trend towards automation.

The shipping industries, similarly, face an expansive future. If world trade is to continue to grow at, and improve upon the recent rates of some 5 to 6 per cent per annum, based upon world exports - and movements towards increased freedom from tariffs and quotas should work in this direction - then more ships will be needed. And older ones will of course need replacing. Additionally, the increasing reliance on and demand for oil for fuel and the growing dependence of the world's steel industries on foreign ores, call for a stepping up of the tanker and ore carrier programs. And rising new nations will tend to build up their own fleets, if only on prestige grounds.

Another concomitant of an expansion in the world economy, is an increase in automobile production. This picture is at present bedevilled by uncertain demand as a result of short term economic difficulties, and of course much of demand in the early postwar years was of a pentup nature. Nevertheless, in the long run there can be little doubt that the de-

mand for vehicles will continue to grow as personal disposable incomes rise and commercial needs expand. A rough projection of the past trend—admittedly without reference to income or population movements (in themselves a statistical exercise) suggests vehicle output might rise another 30 ot 25 per cent by 1956.

In regard to building construction. the belligerents of the last war have probably come to an end of their rebuilding programs and a more normal "pace" is now being followed. This, however, is powerful enough on a long term view and furthermore, the more rapid rate of building in the underdeveloped countries has to be taken into account. There are no overall building figures for the world as a whole, although in the United States there was an increase of about 10 per cent per year in non-farm dwelling units started between 1950 and 1955. And it seems not at all unreasonable, all factors considered, to accept a growth rate of 8 per cent per annum as a guide to the world's building reqquirements.

#### Smaller Consumer

So much for the major users of copper. What of the smaller ones. No great increase in railway building seems likely over the next decade at least not on the scale of previous years. On the other hand, there may be an increasing trend toward electrification. Furthermore, automatic signaling still has a long way to go, as have communications. All this points to more copper and copper alloys being needed. The aircraft industry, a minor factor in copper, also is likely to be expansive, although strategic influences such as the part to be played by guided missiles make it possible to be specific on this point. At any rate, control equipment, and communication apparatus will continue to be needed so long as designs remain broadly unchanged and civilian transportation continues to grow. There can be little doubt that oil refining will continue to be an expanding industry for demand will grow, despite possible supply problems.

Heavy machinery manufacturing, furthermore, is likely to create a net increase in copper usage, since the automation age now upon us will call for a higher degree of mechanization.

These attempts at crystal gazing add up to a possible need for 4.5 million tons of copper by the chief consuming industries by 1965 or some 4.8 million tons in all, excluding defense.

Defense remains a big question mark, and in both its aspects — the active use of copper in ammunition or equipment and stockpiling — it remains inviolate to any form of judgment other than intelligent guesswork. Even so, only the most optimistic observer would speculate on a positive movement toward disarmament on a world scale in the foreseeable future — and the foreseeable period would appear to be a long one in this respect.

#### Defsense Allocation

If 5 per cent of estimated copper needs are allocated to the defense category — a percentage which on all counts seems conseravtive — overall copper demand may be expected to reach 5.1 million tons by 1965 — 46 per cent more than last year.

This consideration of the long-term outlook for copper has been couched in terms of "Free World" demand for copper and has consequently omitted all reference to trends in the Soviet Union.

Until the Second World War, the Soviet Union imported copper since native supplies were not fully exploited. Today an annual production of over 300,000 tons is apparently adequate for ordinary needs. However, there must remain some doubt as to whether the supply of copper will keep pace with the development of the electrical industry and the great expansion of power output. Indeed, Russia has been buying large quantities of cable from the United Kingdom and elsewhere in recent years. Thus the Soviet Union during the next ten years may once again become a factor in world copper markets. But a sure answer to this would require a much more detailed study of output and requirements

#### Strong Growth Factor

In conclusion, I should like to reiterate that there is a strong growth factor at work in the future course of copper consumption. Past investment in world national income, in steel production, populatoin and the use of electrical energy have over the years carried copper consumption with them, and a projection of these trends into the future - with all the dynamism that future portends suggests a further steady rise in the world's copper needs. And this rise, it would now appear, seems likely to be accompanied with increasing supplies commanding relatively stable prices.

#### DOMESTIC COPPER AND TIN MARKETS TIGHTEN UP ON MIDDLE EAST WAR NEWS, THEN EASE ON CEASE-FIRE

Foreign Developments and U.S. Stockpiling Help Keep Lead, Zinc Prices Firm; Slate More Aluminum for Industry; Silver Advances.

November 7, 1956 OPPER and tin markets in this a country reacted promptly and sharply to the Mideast crisis which boiled up during the month in review. During the week or so of violent hostilities in the Suez Canal area, copper prices firmed and tin values soared. But following cessation of actual shooting, copper at this writing had returned to its ante bellum status, which was of a downward nature. Prior to the outbreak of hostilities. all primary producers had reduced their electro price 4.00c a pound to 36.00c a pound delivered, and custom smelters were at the same level. Two primary producers, when they cut their electro prices, also announced their domestic copper output would be reduced.

Spot Straits tin closed at 109.50c a pound New York on November 7, compared with the last previous price of 106.25c for October 19. The peak of 114.00c for the October 19-November 7 period was registered on November 1, a few days after the Mideast crisis flared up.

Lead and zinc prices were firm and unchanged at 16.00c a pound New York and 13.50c East St. Louis for the Prime Western grade, respectively. The firm tone for both metals re-flected the Mideast crisis plus addi-tional Government buying for the S. stockpile.

More aluminum, scheduled for delivery to the stockpile in the first half of 1957, was diverted to private industry. Primary producers firmly maintained their 27.10c a pound price, f.o.b., for 30-pound 99 per cent plus inserts.

Silver advanced 0.375c an ounce on October 17 to 91.375c an ounce. Quicksilver eased off by \$2 per flask to a range of \$253 to \$255 on October

#### Copper Market Quiet

The cessation of fighting in the Middle East, at least for the time being, restored the copper market to status that prevailed prior to the hestilities. Foreign demand for the red metal, which for a short period was active enough to cause the custom smelters to raise their domestic price (to 36.00c, up 1.00c on October 31), has tapered off and with it has come a lower export price of 35.50c a pound f.a.s. U. S. Ports, The domestic demand was not stimulated by the Mid-east fighting, and now that a cease-METALS, NOVEMBER, 1956

#### LATE NEWS, PRICE CHANGES

Copper: Production workers at Ana-conda's Chuquicamata copper mine in Chile decided on November 16 to con-

conda's Chuquicamata copper mine in Chile decided on November 16 to continue working overtime holidays and every other Sunday, reversing an earlier decision eliminating such work that would have curtailed output.

The Government added an extra 3,-600 short tons of new and old unalloyed copper scrap to the previously announced fourth quarter export quots of 6,000 tons. The U. S. Commerce Department said the supplementary quota reflected lower domestic demand, principally in brass mills.

Domestic custom smelters on November 20 were paying 29,50c a pound for No. 2 heavy copper and wire scrap.

Domestic refined copper statistics for October, in tons, follow with September totals in parentheses: output, 136,379 (112,484); deliveries to fabricators, 113,353 (104,486); stocks in producers' hands end of month, 106,120 (93.202).

The Rhodesian Selection Trust increased its fixed electro copper price to British consumers on November 12 from £265 to £280 a long ton (from 33.12c to 35.00c a pound).

Fin: Spot and prompt prices for Straits tin advanced sharply in the New York

33.12c to 35.00c a pound). Tin: Spot and prompt prices for Straits tin advanced sharply in the New York market following the strike on the docks which began midnight, November 15. Spot Straits was quoted at 112.75c a pound on November 20, with prompt at 110.75c.

fire has become effective, consumers saw no special reason for discontinutheir hand-to-mouth policy.

The result, currently, is that little business was being done by smelters at their 36.00c level. The large at their 36.00c level. The large primary producers have been getting moderate orders from their regular customers for December shipment, with the copper at the present time shipped at 36.00c a pound. The fact that one custom smelter was sold out for November and December resulted in additional business for some of the major primary producers. Apparently, given the choice of placing an order with producers or with custom smelters when the two are on an identical price basis, some fabricators prefer to buy from the former.

During the month in review both primary producers and custom smelter copper prices changed. Custom smelters cut their electro price 2.00c on October 22 to 35.00c a pound, since they were unable to interest buyers at the 37.00c level which had been established, also following a 2.00c drop, on October 15.

Another price development on October 22 was a reduction in brass and bronze ingots of 1.25c to 2.00c a pound. The cut in ingot prices was in sympathy with the downtrend in the electro quotation and the lower prices ingot makers paid for scrap, plus the absence of active demand for ingots.

The anticipated break in the

primary producer electro copper price occurred on October 25, when Phelps Dodge reduced its price to 36.00c a pound delivered, a cut of 4.00c from the 40.00c level which had prevailed since July 10 of this year. Earlier the same day the Rhodesian Selection Trust had reduced its fixed copper price to British consumers from £280 to £265 per long ton (from 35.00c to 33.125c a pound). Kennecott and Anaconda and other primary producers also reduced their price to 36.00c on October 29. On war news from the Mideast, plus an increased export demand, custom smelters increased their price 1.00c on October 31 to 36.00c to bring the smelter quotation in line with that of primary producers.

Brass and wire mills, following the reduction in the primary producer electro copper price, revised their prices downward for copper and brass products and copper wire and cable to reflect the 36.00c price.

#### Domestic Output Cut

Following posting of their new, lower price of 36.00c, two major primary producers announced reductions in their domestic copper output. Phelps Dodge Corp., second largest U. S. producer, on October 25 reduced production at its Arizona properties by about 71/2 per cent because of the falling off in demand for copper. Anaconda Co., on October 26, an-nounced a 16 per cent reduction in its U. S. copper output, to be accomplished by elimination of overtime resulting from a six-day work week and holiday work.

The action by Phelps Dodge and Anaconda will cut the monthly domestic copper output by about 3,900 tons. While this curtailment will be reflected in a lower mine output in a month or so, it may take as much as three months before it will show up in the refined production figures since the pipelines to the refineries are still filled and it takes about 90 days from the mining of the ore to its refinement.

Output of copper at Anaconda's Chuquicamata property in Chile will be reduced about 10 to 15 per cent, or about 3,000 tons a month, as the result of action taken by the Copper Mine Workers Union. The Chilean union gave the company notice that the men will not work on legal holidays, or work overtime, or omre than two Sundays in each month Analysis. two Sundays in each month. Anaconda's subsidiary. Andes Copper Mining Co., meanwhile plans a new, expanded program for mining and beneficiating the copper ores of its new El Salcador Mine Project in Chile. Kennecott Copper, the world's largest producer, as yet had not taken any action with respect to curtailment of production.

Lead and Zinc Firm

Demand for lead, currently, has been fair, and for zinc spotty but both metals were firm pricewise. In lead. large consumers apparently already had covered their November needs and had not as yet begun buying for December. Lead sales were done at 16.00c a pound New York.

While zinc had been moving in fair volume to consumers so that an improvement in the statistical position developed, present demand was still spotty. Business was done at 13.50c a pound East St. Louis for the Prime

Western grade.

The firm tone in both lead and zinc was attributed in part to Government buying for the national stockpile. Also, the national election results were gratifying. In some quarters the feeling ers the feeling prevailed that the Washington Administration will very likely conzenue its policy of stockpiling domestic and foreign lead and zinc and thus continue to exercise a stabilizing influence on the market.

Zinc October Statistics

Zinc staged a comeback statistically in October, thanks in part to Government stockpiling of the metal. Output of all grades hit an all-time record high for the month but total deliveries (to domestic consumers, for export and drawback, and to the Government stockpile) exceeded production by 13,355 tons so that stocks in producers' hands were reduced by that amount at the close of last month.

October statistics in tons, follow, with September totals in parentheses: output, 93,493 (90,235); shipments to demestic consumers, 84,991 (71,142); shipments to stockpile, 21,392 (18,-301); total shipments, 106,848 (92,-277); stocks in producers' hands at end of month, 88,810 (102,165).

Tin Easier on Cease-Fire

Tin prices, following the cease-fire order, eased considerably, both here and in London. Tin was most sharply influenced by the Mideast hostilities, since the Suez Canal is of the utmost importance to the trade; tin shipped from Malaya and Indonesia uses the waterway, and last year about 104,-000 tons passed through.

On November 7, with the cease-fire order in effect, spot Straits tin at New York was offered at 109.50c a pound, as against the last previously quoted price in this space of 106.25c for October 19. The high for the October 19-November 7 period was the 114.00c registered on November 1, and the low was 105.75c for October

Of interest to the tin trade was the announcement that two proposals have been made for the purchase of the Government-owned tin smelter at Texas City. (See Washington Report in this issue). Tin output at the Texas City smelter in October totaled 1,654 long tons of 3-Star grade as compared

with 1,349 tons in September and 1,-803 tons in October, 1955.

Divert More Aluminum

Some 400,000,000 pounds of primary aluminum originally scheduled for delivery to the national stockpile has been freed for industry use during the first half of 1957. (See Washington Report in this issue). The action was reported taken, according to Government officials, because of the strong industrial demand. Primary producers firmly maintained their 27.10c a pound price, f.o.b., for 30-pound 99 per cent plus ingots. The secondary aluminum market trend continued weak, with smelters marking down selling quotations for their alloys.

Silver at New York advanced 0.375c an ounce on October 17 to 91.375c an ounce. The former level of 91.00c was of an increase of 0.125c an ounce. established on October 3 as a result

Spot quicksilver was available the New York market at \$253 to \$255 per flask of 76 pounds, which range was established on October 31 following a \$2 reduction. Big consumers were reported to have recently satisfied most of their needs and current buying was spotty. Some sellers indicated they would not sell spot material below \$255 per flask.

Electro Metallurgical Sales Co. reduced its tungsten alloy prices 30,00c per pound of contained tungsten, effective October 20. Ferrotungsten is now \$3.15 per pound of contained tungsten.

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# Daily Metal Quotations in October, 1956

The following quotations are taken from the Daily Metal Reporter

					0	(In Cents Per Pound)	er Pound	^								
		Copper	ober -		St	Straits New York	- Lead	ad			Zinc —			Alum- inum	Anti- mony	Silver
OCLOBER	Producers' Price Del. Conn.	Custom Smelters' or Outside Price	Electro f. o. b. Refinery	Lake Del.	₫ 10dS	Prompt	New York	Outside St. Louis	Prime West. f. o. b. E. St. Louis	Prime West. Del. N. Y.	Brass Spec. f. o. b. E. St. Louis	High Grade Delivered	Spec. High Grade Delivered	30-Lb. Ingot 99% Plus (f. o. b.)	Domestic Spot 99.5% f.o.b. Laredo	(Cents Per Ounce) New York
H 01 00 4 TO	40.00 40.00 40.00 40.00	39.00 39.00 39.00 39.00	39.20 39.20 39.20 39.20 39.20	40.00 40.00 40.00 40.00	$\begin{array}{c} 103.25 \\ 102.875 \\ 103.375 \\ 104.00 \\ 105.00 \end{array}$	$\begin{array}{c} 102.875 \\ 102.50 \\ 103.00 \\ 103.75 \\ 104.75 \end{array}$	16.00 16.00 16.00 16.00 16.00	15.80 15.80 15.80 15.80	13.50 13.50 13.50 13.50							000000
8 8 10 11	40.00 40.00 40.00 40.00	39.00 39.00 39.00 39.00	39.20 39.20 39.20 39.20	40.00 40.00 40.00 40.00	104.375 104.125 105.00 105.50	104.125 103.875 104.75 105.25	16.00 16.00 16.00 16.00 16.00	15.80 15.80 15.80 15.80	13.50 13.50 13.50 13.50							91.00 91.00 91.00 91.00
122	40.00 40.00 40.00 40.00	39.00 37.00 37.00 37.00	39.20 38.20 38.20 38.20	40.00 40.00 40.00 40.00	106.50 106.50 107.00 106.75	106.25 106.25 106.625 106.25	16.00 16.00 16.00 16.00	15.80 15.80 15.80 15.80	13.50 13.50 13.50 13.50							91.00 91.00 91.375
2522222	40.00 40.00 40.00 40.00 38.00	35.00 35.00 35.00 35.00 35.00	38.20 38.20 37.20 37.20 37.20	40.00 40.00 40.00 40.00 40.00 36.00	106.25 107.00 106.25 106.25 106.25	106.625 106.00 105.50 105.875 106.00	16.00 16.00 16.00 16.00 16.00	15.80 15.80 15.80 15.80 15.80	13.50 13.50 13.50 13.50 13.50							91.375 91.375 91.375 91.375 91.375
29 30 30 81 <b>AV</b> .	38.00 36.00 36.00 36.00 39.308 40.00		37.20 35.20 35.20 35.70 38.065 39.70	36.00 36.00 36.00 36.00 39.231 40.00	107.75 110.25 112.50 106.023 112.50	107.50 110.00 112.25 105.716 112.25	16.00 16.00 16.00 16.00 16.00 16.00	15.80 15.80 15.80 15.80 15.80 15.80	13.50 13.50 13.50 13.50 13.50 13.50	14.00 14.00 14.00 14.00 14.00	13.25 13.25 13.25 13.25 13.25 13.25	14.85 14.85 14.85 14.85 14.85 14.85	15.25 15.25 15.25 15.25 15.25	27.10 27.10 27.10 27.10 27.10 27.10	33.00 33.00 33.00 33.00 33.00	91.375 91.375 91.375 90.722 90.875

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#### Rare Metals Seen Sparking New Industries of Future

(Continued from Page 10)

better goods for a higher standard of

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It is here that the rare metals field is particularly and adversely affected. In many cases, our knowledge of their true properties is very limited, and we have had ample demonstration of their resistiveness to extraction by classical processes. In few instances, indeed, is there assurance that a profitable market awaits. To further complicate the situation, the determination of the properties of rare metals depends in general on a much higher state of purity than is the case for the more common ones, and their preparation in anything like a pure form will often depend on the development of special techniques.

#### Research Costly

This can only be accomplished by long, arduous, and costly research; but it is particularly difficult for the small and medium-sized business enterprises interested in this field to raise the money necessary to carry on such programs. Banks will not loan the money, the business seldom generates sufficient funds, and risk capital for research is very difficult to obtain. Yet the contribution these small and medium-sized businesses can make to our national economy depends as much on this financial backing as it does on the imagination and perserverance of those leading the research.

Our experience at Vitro has taught us there is no short cut to a bonanza in this field. At what is now our Rare Metals Division, we produced the first gram of radium refined in this country, nearly 25 years ago. We have been active since 1942 in the emergency transition of uranium from rarity to relative abundance. More recently we have extended our interest to other rare metals, and the rare

earths.

The reasons why we are increasingly active in this field, despite the hazards, the difficulties, and the problems I have cited — that particularly affect a medium-sized company like Vitro — are these. We have seen in the past 20 years a phenomenal increase in the knowledge of the

physical sciences, and their industrial application. We expect this trend to accelerate in the future. The opportunity of sharing in the direction of this increasing force of technology, in attacking the immense undeveloped wealth of rare metal resources in our land, and in the seas that wash our shores — this opportunity is to us a fascinating challenge.

#### Washington Report

(Continued from page 5)

this year. By comparison, contracts totaled \$101,100,000 in the preceding three months and \$43,729,000 a year earlier.

Barter contractors delivered \$34,-292,000 worth of foreign materials in payment in the July-September quarter, compared with \$48,200,000 in the April-June period and \$26,030,000 in July-September of 1955.

#### Bid for Longhorn Smelter

Federal Facilities Corp. announced that two proposals to buy the Gov-

ernment-owned Longhorn Tin Smelter at Texas City, Texas, have been received; one from Wah Chang Corp., New York City, and the other from Ellis E. Patterson and S. Fishfader, Los Angeles, Calif. The Patterson-Fishfader proposal was filed on behalf of a group of interested parties. Negotiations with these bidders is under way and will be concluded no later than December 27, 1956. Disposal of the smelter and other assets of the Government's tin program were authorized by Public Law 608, 84th Congress, 2nd Session.

#### Antimony, Mercury Recovery

Successful laboratory tests by the U. S. Bureau of Mines, which may lead to development of an economical method for recovering both antimony and metrury from ores of the Kuskokwim River area in Alaska, are described in a report released by the Department of Interior. When mercury and antimony occur together, the antimony not only interferes with recovery of the mercury by standard methods but is itself lost.

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# Copper Statistics Reported by Copper Institute Combined Totals in U. S. A. and Outside U. S. A. (In tons of 2,000 pounds) Professor Delivering to Professor Stack In

		Crude	Product	ion	Refine		liveries		ined Stock	S	tock Inc	reases o	or Decre	ases
	F	rimary		ndary	Product		ustomer		of Period	Blis	ter	Refined	i	Total
1955 Aug		195.394	10	,138	208,97	74	200,049		230,022	— 3,	441	+10.379	) +	6,938
Sept	:	236,949	13	,788	248,48	31	262,118		228,002	+ 2,		- 2,020		236
Oct		245,462		,439	244,2 239,9		246,89 248,82		227,261 218,519	+12, $-1,$		$ \frac{74}{-}$ 8,81		-11,905 -10,025
		214,114		,304 .713	250,3		247,22		221,331	-24		+ 1,64		-21,710
1955 T	otal2,			,065	2,728,3		2,744,39		221,331	+18,		- 8,55		-11,112
1956		099 907	11	1,250	237,3	00	242,42	5	217,315	+ 7	847	4,01	6 4	3,831
		233,897 228,409		1,355	243,4		236,84		226,686		193	+ 9,37		- 9,178
		243,676	14	1,293	258,4	62	261,81		225,827		493	- 85		- 1,352
Apr		232,986		<b>1,716</b> 8,608	<b>254,4</b> 269,8		242,24 $256,24$		238,125 252,130	-6		+12,29 $+12,16$		- 5,538 - 1,900
		238,814		1,360	251,3		236,71		266,221	+ 1		+14,09		-15,130
July		233,182	11	1,174	240,6		198,80		303,225	+ 3		+37,00		-40,727
	******	241,295 221,401		$0,005 \\ 8,126$	242,8 217,5		224,54 $219,47$		315,572 309,351	$^{+8}_{+12}$		+12,34 $-6,22$		-20,833 - 5,784
	******	255,305		3,236	263,2		234,36		333,207	+ 5		+23,85		-29,718
						In	U.S.	A.						
1955		67,990		9,364	98.7	99	90.51	16	49,350			+-13,05	7	
		96,343		2,739	139,8		145,59		53,625			+ 4,27		
Oct		99,514	10	0,279	127,8	65	134,84	14	49,738			- 3,88	37	*****
		94,287		7,888	133,7		142,83		48,736			-1,00		
	otal1	93,186 .036.702		0,912 $4,760$	145,4 1,467,4		139,51		61,554 61,554			+12,81 $+14,44$		
1956														
		96,732		0,353	123,9		130,43		50,016			11,53		
		89,326 99,681		1,697 $2,596$	127,9 144,0		139,38 141,59		<b>47,053</b> 51,595			-2,96		
Apr		95,499	1	3,780	140,0		139,92	27	54,887			+ 3,29	92	
	******			7,475	145,7		142,96		56,208			- 52		
		98,496 84,787		$2,471 \\ 0.387$	136,7 $125,4$		131,29 97,69		60,671 87,944			+4,46 $+27,27$		
Aug	******	91,282		9,545	122,1	.08	109,6	18	96,450			+ 8,50	06	
		88,659 94,955		7,367 $2,546$	112,4 136,3		104,48		93,202			-3,24 +23,85		
0.00		04,000		2,040	100,0		de U.					20,00		
1955						Outon	ac o.	D						
	*****			774	110,2		109,5		180,672			2,67		
				1,049 1,160	108,6 116,4		116,5 $112,0$		174,377 177,523			-6,29		
Nov		135,089		1,419	107,0		105.9		169,783			- 7,74		
	Potal 1			801	104,9		107,7		159,777			-10,00		*****
1956	lotal1	,570,900		8,305	1,260,8	100	1,298,0	37	159,777	* *		21,78	02	*****
				897	113,		111,9	94	167,299			+ 7,5	22	
	******			1,808 1,697	115,		97,4		179,633		* * * *	+12,3		
				936	114,4 114,4		120,2 $102,3$		174,232 183,238			-5,40		
May .		135,755		1,133	124,		113,2		195,922			+12,68		
				1,136 787	114,6		105,4		205,550		* * * *	+ 9,6		
				460	115,2 120,		101,10		215,281 219,122			+ 9,73 $+$ 3,8		
Sept.		132,742		759	105.	038	114,9		216,149			- 2,9	73	
Oct.	cluding R	160,350 ussia, Yug	coslavia, l	1,303 Norway, S	126,3 Sweden, Ja	913 pan. Aust	121,0	12	227,087			+10,9	38	
-	ctro						lytic	Can	nor		Lak	e Co	nner	
	roducers'	-	-	-			ers' Pri			F	roducers			ed
	Monthly						Averag					Avera		
		ts Per Po				(Cer	nts Per P	ound)				ts Per P		
												40-1		10-0
	1953	1954	1955	1956	Ton	1953	1954	1955	1956	Ton	1953	1954 30.00	1955 30.12	1956 43.00
Jan. Feb.	24.50 25.46	29.88 29.88	30.24 33.00	43.00 44.03	Jan. Feb.	$24.50 \\ 25.804$	29.75 29.75	30.48 33.00	50.22 52.07	Jan. Feb.	24.625 24.625	30.00	33.00	43.783
Mar.	31.49	29.93	33.222	46.00	Mar.	33.269	29.866	33.667	53.11	Mar.	32.00	30.00	33.56	46.00
Apr.	30.59	29.98	36.00	46.00	Apr.	31.18	29.965	36.00	48.88	Apr.	32.23 Nom	30.00	36.00 36.00	46.00 46.00
May June	29.72 29.94	30.00	36.00 36.00	<b>46.00</b> 46.00	May June	29.785 29.875	30.00 30.00	36.00 36.00	<b>44.221</b> 40.00	May June	Nom. 30.125	30.00	36.00	46.00
July	29.92	30.00	36.00	41.56	July	29.846	30.00	36.00	38.14	July	30.125	30.00	36.00	41.68
Aug.	29.69	30.00	37.81	40.00	Aug.	29.375	30.00	40.14	39.32 39.00	Aug.	30.125 30.125	30.00 30.00	<b>37.46</b> 43.00	<b>40.00</b> 40.00
Sept. Oct.	29.75 29.80	30.00	$43.00 \\ 43.00$	40.00 39.398	Sept.	29.50 29.606	$30.00 \\ 30.00$	$50.00 \\ 45.99$	37.192	Sept. Oct.	30.125	30.00	43.00	39.231
Nov.	29.88	30.00	43.00	****	Nov.	29.75	30.00	45.84	****	Nov.	30.125	30.00	43.00	
Dec.	29.88	30.00	43.00	* * * *	Dec.	29.75	30.00 29.944	49.42 39.38	****	Dec. Aver.	30.038 29.47	30.00	43.00 37.51	****
Aver.	29.15	29.27	37.522	****	Aver.	29.35	29.944	05.00	* * * *	Aver.		METALS,		ER. 1956
20												minus,	HOVEME	Lite, 1996

#### Fabricators' Copper Statistics

(In tons of 2,000 pounds)

	Fabricators' Stocks of Refined Cop.	Unfilled Purchases of Refined by Fab. from Producers	Fabricators' Working Stocks	Unfilled Sales by Fabricators to Customers	Actual Copper Consmd. by Fabricators	Excess Fabricators' Stocks Over Orders Bkd.
1950	aterinea cop.	I Toudettie	Diocas	Customers	1 4011041015	Olders Dad.
Total	290,241	92,372	288,392	313,052	1,438,327	-218,831
1951				,	-,,	
Total	280,402	32,147	295,385	303,050	1,392,111	-285,886
1952	,					
Total	333,455	32,652	292,157	275,312	1,389,451	-201,362
1953				•		
Total	380,881	25,022	309,664	170,917	1,375,869	-74,678
1954						
Apr	341,616	30,677	302,391	124,559	104,943	-54,657
May	349,796	33,210	305,504	123,039	102,810	-45,537
June	351,518	43,723	304,833	122,218	104,531	-31,810
July	370,287	41,104	307,352	130,576	80,751	-26,537
Aug.	359,474	58,007	302,423	131,514	102,966	-16,456
Sept.	341,726	50,650	300,603	148,515	106,628	56,742
Oct.	330,787	50,240	299,068	135,140	116,232	-53,181
Nov.	335,315	55,517	301,097	137,076	114,392	- 47,341
Dec.	360,526	58,125	304,619	136,581	99,479	-22,549
Total					1,232,090	
1955						
Jan.	334,105	66,122	302,658	159,016	136,539	-61,447
Feb.	323,425	75,840	301,597	180,898	118,786	-83,230
Mar.	311,235	85,859	301,937	187,827	143,544	-92,670
Apr.	316,575	88,992	304.117	205,308	115,073	-103,858
May	327,343	111,715	309,219	323,279	113,485	-102,440
June	327,696	126,703	309,972	234,578	132,377	-90,151
July	312,587	165,505	301,048	286,095	75,846	-109,051
Aug.		150,854	303,089	283,653	97,688	-131,791
Sept.		133,391	314,111	270,102	113,628	-115,826
Oct.	353,469	135,075	313,048	275,255	115,453	- 99,759
Nov.	373,314	139,855	313,779	283,953	122,332	- 84,563
Dec.	389,974	139,094	314,145	293,264	127,006	-78,341
Tota					1,412,287	
1956						
Jan.	376,753	143,815	312,128	305,942	138,711	-97,502
Feb.	388,823	135,637	319,279	282,314	130,923	-77,133
Mar.		140,348	319,056	291,465	135,746	-78,030
Apr.		135,071	319,247	266,239	118,839	-36,436
May		131,023	318,592	249,352	122,253	- 1,838
June		114,223	324,970	227,097	113,835	+ 13,282
July	465,015	109,040	334,584	220,810	81,275	+ 18,661
Aug		115,295	338,818	221,975	117,937	+ 12,181
Sept		114,981	338,488	204,154	115,867	+ 18,018

#### Scrap Copper Receipts by Custom Smelters and Refineries in United States\*

(In Short Tons) 1956 14,322 14,497 15,921 17,233 20,805 14,758 12,632 12,510 9,518 1952 4,528 3,688 5,243 6,214 1953 6,486 10,387 19,991 16,584 1955 11,047 15,198 12,198 13,162 1949 17,084 20,238 1956 15,763 12,500 1951 6,640 5,153 7,912 8,553 1954 9,869 8,490 9,738 9,004 1947 10,172 11,890 11,954 15,125 7,080 ... 5,394 ... 9,187 ... 13,065 Mar. Apr. May June 13,538 12,304 20,678 14,237 8,809 7,782 8,246 8,458 8,628 6,642 6,113 3,561 8,033 4,425 5,188 5,003 10,857 10,945 9,063 7,137 8,687 13,309 10,260 10,100 15,133 14,765 9,988 12,197 9,883 8,578 **8,572** 10,611 July 8,370 17,081 Aug. Sept. Oct. Nov. Dec. 10,452 16,001 10,854 7,625 11,826 4,667 6,401 4,903 9.042 10,641 15.037 9,518 15,570 7,815 11,476 10,879 ..... 71,812 62,870 129,798 ...112,386 147,931 156,308 142,067 Total

\*As compiled by Copper Institute.

METALS, NOVEMBER, 1956

#### Brass and Bronze Ingot Monthly Shipments

(Net Tons)

	The	follo	wing f	igures	showi	ng the	e comb	pined s	hipme	nts of	ingot	brass
and	bro	nze a	re con	mpiled	by th	ne Ing	ot Br	ass ar	nd Bro	onze I	ndustry	and
repr	esen	t in e	xcess o	f 95 p	er cent	of the	e deliv	eries o	f the	entire i	industr	V.
		1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Jan.		29,196	27,841	26,998	19,456	18,874	28,416	28,315	24,423	20,661	25,201	27,736
Feb.			24,686	22,487	15,026	18,487	27,168	24,211	25,429	19,920	25,849	24,949
Mar.		27,176		24,282	14,550	22,494		23,890	28,256	23,653	29,713	28,310
Apr.				25,177	10,695	22,118	80,472	22,547	25,044			25,808
May			19,525	23,716		23,643		21,740	21,660			23,437
June		31,349	16,929	24,401	9,696	25,093	33,817	21,274	20,818	22,348	23,141	18,842
July			16,728	20,456	10,220	21,609	32,016	18,947	19,321	17,074		17,364
Aug.			18,589	24,098	14,194	26,689	25,285	21,807	20,156		27,018	23,812
Sept.		27,390	19,025	23,641	16,208	28,811	22,285	22,770	21,463	22,464	26,349	20,929
Oct.			22,806	21,559	18,026	32,240	23,124	25,811	22,280	24,080	25,228	23,045
Nov.		29,232	21,666	21,731	18.488	31,748	23,544	23,441	21,860	23,061	25,102	
Dec.		27,206	23,862	20,954	17,960	28,575	20,987	22,983	20,541	21,274	21,448	****
Total			268,711 21,976	279,500			832,878 27,615	277,736 23,145			298,406	

#### Mine Production of Copper

			~	-
	(	In short	of Mines)	
	Eastern	Missouri	Western	Total
1953 Ttl.	20 000	0.274	00F 174	000 440
1954	38,900	2,374	885,174	926,448
Ttl.	40,302	1,925	793,241	835,472
1955	40,302	1,920	133,241	000,412
Feb.	5,339	185	77,968	83,492
Mar.	6,655	220	86,894	93,769
Apr.	5,644	190	83,320	89,154
May	4,606	199	86,019	90,824
June	5,192	189	84,011	89,392
July	4,678	169	28,496	33,343
Aug.	5,028	125	62,082	67,235
Sept.	6,928	130	83,213	90,271
Oct.	6,552	195	85,445	92,192
Nov.				
	6,188	184	84,681	91,053
Dec.	6,758	179	81,638	88,575
Ttl.	68,622	2,140	921,838	992,600
1956 Jan.	6,674	163	87,682	94,519
		164		
Feb.	6,688		82,560	89,412
Mar.	7,347	198	90,398	97,943
Apr.	6,821	195	88,594	95,610
May	6,960	191	92,513	99,664
June	6,720	173	88,041	94,934
July	6,132	185	74,298	80,615
Aug.	6,638	219	85,310	2,600

# Average Custom Smelters' Scrap Buying Prices (Cents per pound for carload lots del.

consu	mers' w		ots uci
No. 1 Copper	No. 2 Copper	Light	Re-
Scrap	Scrap	Scrap	finery Brass
1954			
Av 26.75	25.22	23.69	22.92
1965			
Aug39.93	38.43	36.40	34.24
Sept43.88	42.38	40.00	38.21
Oct39.48	37.98	36.69	35.83
Nov40.08	38.58	36.33	36.34
Dec 42.75	41.25	38.79	38.71
Av37.035	35.535	33.59	32.70
1956	-	00.00	02.10
Jan 42.39	40.89	38.42	38.26
Feb 43.35	41.85	39.35	38.65
Mar 45.77	44.27	41.77	41.02
Apr 41.65	40.15	37.65	38.15
May36.06	34.56	32.06	32.50
June33.32	31.82	29.32	29.03
July32.69	31.19	28.69	28.98
Aug34.269	32.769	30.269	30.75
Sept33.56	32.06	29.81	29.92
Oct30.964	29,464	27.214	27.44

\*Of dry content for material having a dry copper content in excess of 60%.

#### Brass Ingot Makers' Scrap Copper Buying Prices

(Average Prices)
(Cents per pound del. refinery for 60,000 lbs. of each grade)
No. 1 No. 2 No. 1
Copper Copper Composer Scrap Scrap sition Bras Heavy Yellow Brass . . 26.59 25.07 20.99 16.24 Av. 1955 38.24 23.76 .39.74 32 67 Aug. Sept. 35.01 24.96 22.80 .43.88 42.38 32.22 Oct. 39.468 37.968 . . 40.08 38.58 33.15 22.53 Nov. 41.22 Dec. .43.58 24.22 . . 36.63 Av. 35.02 29.905 22.35 Jan. . . 42.39 40.89 24.51 Feb. . . 43.35 41.85 34.72 24.79 . . 45.77 Mar. 44.27 36.46 27.76 ...36.06 24.49 19.89 Apr.  $40.15 \\ 34.56$  $\frac{34.40}{29.58}$ May 26.37 .33.32 31.82 18.40 June July ...32.69 31.19 26.89 18.43 .34.269 32.769 29.833 20.463 Aug. Sept. .33.26 32.25 30.07 20.92 Oct. ..30.687 29.187 28,058 19.538

#### United States Lead Statistics of Primary Refineries

(American Bureau of Metal Statistics) (In tons of 2,000 lbs.)

		Production			
	Stock At	Primary &	Total	Stock	Domestic
	Beginning	Secondary	Supply	At End	Shipments
1952	25,339	532,778	558,117	43,560	492.091
1953	43,560	533,883	577,443	81,152	488,437
1954			,	,	/
November	95,496	46,711	142,207	94.387	34,913
December		46,506	140,893	92,719	37,017
Total		551,618	632,770		475,551
1955		002,020	002,110		2,0,002
January	92,719	44.780	137,499	84,882	40,451
February		40,173	125,055	64,938	46,645
March		50,308	115,246	59,881	42,381
April		50,274	110,155	54,956	44,878
May	54,956	45,435	100,391	50,947	46,130
June	FO 0 400	48,150	99.097	44,665	44,985
July		23,850	68,515	39,856	26,547
August		36,912	76,768	34,111	41,469
September		50,453	84,564	30,753	46,250
October		53,747	84,500	29.913	52,062
November	00 010	52,623	82,536	28,855	51,370
December		50,448	79,303	31,089	48,171
Total		547,153	639,872		531,339
1956		,	,		
January	31,089	51,306	82,395	32,469	49,746
February	32,469	49,475	81,944	41,450	39,411
March		54,174	95,624	52,089	39,344
April		52,976	105,065	53,958	44.986
May		47,961	101,919	50,460	40,703
June		47,367	97,827	45,951	41,458
July		48,479	94,430	49,134	36,483
August		48,404	97,538	39.304	48,404
September	39,304	53,530	92,834	40,542	47,519

In instances where the figures are not in balance it is due to shipments to other than domestic consumers.

#### Industrial Classification of Domestic Lead Shipments

****							. JP	
	(American	Bureau of	Metal	Statistics)			2,000 lbs.)	
					Brass	Sun-	Job-	Unclas-
	Cable	Amm.	Fo		Making		bers	sified
1950	66,646	28,854	3,304		6,374	60,118	10,450	230,594
1951	70,149	32,099	2,063		5,583	48,248	3,550	259,155
1952	74,616	30,809	1,374	77,238	5,160	50,943	5,671	246,283
1953								
Total	76,283	34,415	2,136	80,339	5,716	55,936	6,390	227,222
1954								
Mar.	7,620	2,405	252	6,663	149	6,818	492	23,438
Apr.	6,207	2,550	361	6,341	308	5,194	342	25,798
May	6,030	2,310	276		250	4,621	1,020	20,041
June	6,116	3,700	122		406	6,525	1,114	23,293
July	4,000	1,500		0.000	415	4,121	861	19,608
Aug.	8,799	3,358	146		838	5,377	1,152	17,621
Sept.	4,602	1,653	564		20	4,667	851	14,424
Oct.	6,142	1,970	657		383	4,581	829	17,573
Nov.	5,816	3,795	333		520	3,202	721	16,628
Dec.	7,707	1,880	100		141	3,530	906	16,963
Total	75,412	30,246	2,811		5,192	57,369	9,170	229,264
1955	10,111	00,220	_,	00,000	0,202	01,000	0,210	
Jan.	7.044	1.570	36	5,158	213	4,451	857	21,122
Feb.	5,869	3,200	348		289	4,796	1,013	24,373
Mar.	6,538	2,340	614		240	3,807	1,167	20,778
Apr.	5,909	2,625	201		463	5,178	1,234	22,735
May	6,145	2,950	251		321	4,435	1,145	22,756
June	6,623	950	50		290	5,175	1,293	23,816
July	2,313	150	307		100	3,763	946	14,603
Aug.	5,772	2,800	210		290	3,741	1,230	22,632
Sept.	6,552	2,295	415		354	4,711	1.149	22,980
Nov.	6,606	2,433	70		387	3,795	874	23,330
Dec.	6,275	3,260	35		449	4,289	839	25,516
Total	72,418	27,599	2,622		3.960	52,994	13,034	270,251
1956	12,410	21,000	in y Cont	00,401	0,000	02,004	10,004	210,201
Jan.	7,777	3.075	200	6.555	290	8,538	917	22,394
Feb.	5,974	2,435	384		275	3,592	871	19.897
Mar.	6,786	1,300	101		321	3,915	1,331	20,687
		2,950	310		260	3,522	1,376	24,985
Apr.	6,744	2,825		FOOF	131	3,513	964	21,753
May	6,490			4 107	186	3,645	1,021	21,787
June	8,502	2,150 904	* * *	FOOM	80	2,859	1,453	22,683
July	3,497				713			
Aug.	7,712	1,497	8			4,443	1,262	26,358
Sept.	6,354	1,850	138	6,303	230	5,038	1,339	26,270

#### Lead Prices at New York

(Common Grade)

	Monthly	Avera	ge Prices	5
	(Cent	s per	pound)	
	1953	1954	1955	1956
Jan.	14.192	13.26	15.00	16.16
Feb.	13.50	12.82	15.00	16.00
Mar.	13.404	12.94	15.00	16.00
Apr.	12.64	13.91	15.00	16.00
May	12.75	14.00	15.00	16.00
June	13.413	14.11	15.00	16.00
July	13.683	14.00	15.00	16.00
Aug.	14.00	14.06	15.00	16.00
Sept.	13.74	14.60	15.12	16.00
Oct.	13.50	14.97	5 15.50	16.00
Nov.	13.50	15.00	15.50	

#### Lead Sheet Prices

15.00 13.485 14.06

15.14

13.50

(To Jobbers, Full Sheets) Monthly Average Prices (Cents per pound)

	(Ocu	a her	pound)	
	1953	1954	1955	1956
Jan.	19.192	18.26	20.00	21.66
Feb.	18.50	17.82	20.00	21.50
Mar.	18.404	17.94	20.00	21.50
Apr.	17.64	18.91	20.00	21.50
May	17.75	19.00	20.00	21.50
June	19.413	19.11	20.00	21.50
July	18.683	19.00	20.00	21.50
Aug.	19.00	19.06	20.00	21.50
Sept.	18.74	19.60	20.12	21.50
Oct.	18.50	19.975	20.50	21.50
Nov.	18.50	20.00	20.50	
Dec.	18.50	20.00	20.56	

#### **Battery Shipments**

The following table shows replacement battery shipments in the United States as compiled by the Business Information Division of Dun & Bradstreet, Inc., for the Association of American Battery Manufacturers.

(	In	thou	ısands	of	units)
	1	953	1954		1955
	1.1	571	1 788		1 478

	1953	1954	1955	1956
Jan.	 1,571	1,788	1,478	2,005
Feb.	 1,162	1,422	1,647	1,305
Mar.	 1,202	1,194	1,321	1,313
Apr.	 1,245	1,150	1,281	1,331
May	 1,455	1,391	1,572	1,714
June	 2,004	1,834	1,794	1,760
July	 2,528	2,288	2,024	2,121
Aug.	 2,707	2,481	2,777	2,532
Sept.	2,852	2,728	3,073	2,675
Oct.	 2,825	2,667	3,036	
Nov.	 2,173	2,410	2,622	
Dec.	 1,890	1,796	2,556	

Total .23,614 23,149 25,147

#### Lead Stocks at Primary U. S. Smelters and Refiners

(American Bureau of Metal Statistics) (In tons of 2 000 lbs )

	In ore and		bullion (lead	content) —	,		
	matte and in process at smelters	At smelters & refineries	In transit to refineries	In process at refineries	Refined pig lead	Anti- moniial lead	Total Stocks
1954							
July 1	61,669	12,241	3,660	26,046	94,828	9,798	208,242
Aug. 1	63,093	17,196	2,592	30,301	80,820	12,210	206,212
Sept. 1	62,851	18,688	2,903	29,792	72,150	12,279	198,663
Oct. 1	63,731	18,771	4.155	29,024	79,190	14,168	209,039
Nov. 1	59,660	17,095	3,265	28,373	80,650	14,846	203,889
Dec. 1	57,452	16,888	2,570	27,816	79,814	14,573	199,113
1955							
Jan. 1	62,074	18,170	1,723	27,164	77,930	14,789	201,850
Feb. 1	59,803	15,485	3,133	29,393	69,980	14,902	192,196
Mar. 1	64,492	17,741	3,781	28,467	52,734	12,204	179,419
Apr. 1	57,577	20,063	2,309	28,564	47,496	12,385	168,394
May 1	59,686	17,468	3,496	25,373	43,207	11,749	160,979
June 1	59,632	17,705	1,941	27,979	39,892	11,055	158,204
July 1	58,182	14,707	2,941	30,579	34,432	10,233	151,074
Aug. 1	65,476	10,065	1,303	26,792	30,077	9,779	143,492
Sept. 1	75,057	17,183	3,744	29,660	26,859	7,252	159,755
Oct. 1	70,628	19,083	4,217	28,424	23,292	7,461	153,105
Nov. 1	71,257	20,682	4,276	28,596	21,828	8,085	154,724
Dec. 1	64,109	20,232	4,377	27,486	19,592	9,263	145,059
1956							
Jan. 1	71,812	16,532	3,764	27,625	21,196	9,893	150,822
Feb. 1	70,690	19,082	1,764	25,632	24,080	8,389	149,637
Mar. 1	71,023	16,406	2,583	27,519	32,355	9,095	158,981
Apr. 1	72,358	15,655	2,152	28,065	41,800	10,289	170,319
May 1	74,837	15,500	2,718	24,181	43,268	10,690	171,194
June 1	78,987	15,477	2,475	26,682	39,558	10,902	174,081
July 1	81,796	15,837	4,423	28,505	36,499	9,452	176,512
Aug. 1	76,985	16,856	3,516	29,603	38,210	10,924	176,094
Sept. 1	81,634	18,529	2,874	29,991	29,230	10,074	172,332
Oct. 1	77,787	15,991	4,413	28,083	28,361	11,181	116,816
000. 1	11,101	10,001	4,410	20,000	20,001	11,101	110,010

#### Receipts of Lead in Ore and Scrap

By U. S. Smelters (a)

(American	Bureau of	Metal Statistics)	(In	Receipts of lead	Total receipts
	Rece	ipts of lead in	ore	in scrap	in ore,
Un	ited State	s Foreign	Total	etc. (b)	& scrap
1952 Total	405,990	98,276	504,266	41,845	546,111
1953 Total	351,183	155,788	506,971	42,994	549,965
1954		/	,	, , , , , ,	
October	26,884	12,561	39,455	5.134	44,579
November	29,107	8,622	37,729	5,628	43,357
December	29,646	16,020	45,666	4,457	50,123
Total	336,291	158,081	494,372	49,864	544,236
1955	000,202	200,002		/	/
*	28,767	11,502	40,269	3,509	43,778
February	27,456	17,400	44,856	2,738	47,594
	30.056	11.104	41.160	3,291	44,451
March		16.347	45,054	3,249	48,303
April	28,707		41,888	4,879	48,767
May	28,511	13,377		4,509	47,449
June	28,273	14,667	42,940		
July	23,027	3,826	26,853	649	27,502
August	30,249	11,859	42,108	3,942	46,050
September	29,377	14,881	44,258	3,623	47,881
October		20,845	<b>50,91</b> 8	5,655	56,573
November	27,736	13,022	40,758	3,802	44,560
December	29,363	24,136	53,499		56,649
Total	341,595	172,966	514,561	42,996	557,557
1956					
January	27,184	15,704	42,888	6,346	49,234
February		16,528	45,097	4,577	49,674
March		17.904	49,472	3,989	53,461
April		15,224	47,010		51,262
May		18,476	51,191	4,711	55,902
June	04 540	16,251	47,797	4,541	52,338
July		13,476	43,440		46,647
			51,838		57,723
August			45,007		48,358
September	28,731	16,276	40,007	0,001	40,000

(a) Receipts of lead in ore are computed on the basis of recoverable lead. Owing to the estimational factor in this, which is probably on the low side, and also to the possibility that some lead receipts may escape attention, these monthly totals probably underrun the actual production of pig lead. (b) inclusive only of scrap smelted in connection with ore, plus some scrap received by primary refiners.

METALS, NOVEMBER, 1956

#### N. Y. Lead Price Changes

	(Effectiv	e Date	)
194		195	3
Nov.	1612.50	Jan.	714.50
Nov.	2112.00	Jan.	1214.00
195	0	Feb.	213.50
Mar.	911.00	Mar.	413.90
Mar.	1410.50	Mar.	1013.50
Apr.	2010.75	Apr.	713.00
Apr.	2611.00	Apr.	1612.50
May	411.25	Apr.	2112.00
May	1011.50	Apr.	2912.50
May	1112.00	May	1812.75
June	2311.50	May	1913.00
195	1	May	2613.15
June	2811.00	June	1113.50
July	1211.50	July	2013.75
July	1312.00	July	2314.09
Aug.	1513.00	Sept.	1613.50
Aug.	2114.00	195	
Sept.	115.00	Jan.	1813.00
Sept.	816.00	Feb.	1812.50
Oct.	2**19.00	Mar.	912.75
Oct.	3117.00	Mar.	1013.00
195		Mar.	2613.25
		Mar.	2913.50
Apr.	2918.00	Apr.	113.75
May May	217.00	Apr. June	1214.00
June	1215.00	June	214.25
June	$23 \dots 15.50$ $24 \dots 16.00$	Aug.	1514.00 $2514.25$
Oct.	715.00	Sept.	714.50
Oct.	1414.00	Sept.	1514.75
Oct.	$22 \dots 13.50$	Oct.	414.875
Nov.	314.00	Oct.	515.00
Nov.	1014.20	198	
Nov.	1114.50	Oct.	
Nov.	2014.25	Oct.	15.50
Nov.	24 14.00	Oct.	2615.50
Dec.	2214.25	Dec.	2916.00
Dec.	2914.50	198	
Dec.	3114.75	Jan.	416.50
Dec.		Jan.	
*OP	A Ceiling. ‡Reta	irned to	
**OPS	Ceiling.		

#### Antimonial Lead Stocks at Primary Refineries

End of: 1953 1954 1955 Jan. 11,572 14,691 14,902 Feb. 10,736 14,798 12,204 Mar. 11,484 11,985 12,385 8,389 9,095 10,289 10,690 11,484 11,248 10,764 12,385 11,740 Apr. 11,977 May 11,882 11,055 10,902 9,798 12,210 12,279 14,168 14,335 14,247 14,748 June 10,233 9,452 10,924 July 9,779 Aug. 7,252 7,46110,074 Sept. 15,877 11,181 Oct. 15,742 14,846 8,085 14,573 14,789 Nov. 16,498 9,263 Dec. 16,116 9,893

#### **Antimonial Lead Production** by Primary Refineries

	(4	. D. M. C	10 /	
End of	(In ter	of 2,00 1954	0 lbs.) 1955	1956
Jan.	2,937	3,768	4,529	5,045
Feb.	3,682	4,257	4,777	5,888
Mar.	5,353	4,475	6,202	5,526
Apr.	5,027	4,470	5,343	5,818
May	6,497	4,373	4,737	5,405
June	9,270	3,796	4,792	4,456
July	5,259	5,991	1,153	3,853
Aug.	4,668	6,455	2,946	5,342
Sept.	5,509	5,869	6,650	6,709
Oct.	5,100	5,532	8,016	
Nov.	5,400	5,364	7,985	
Dec.	3,060	5,255	6,907	
Total	61.762	59.875	64.037	

#### U. S. Lead Consumption

(Bureau of Mines - In Short Tons)

Metal Products:

Calking lead ... Casting metals Collapsible tubes

Solder

Total

Pipes, traps & bends Sheet lead ......

Storage battery grids, 
 Storage battery grids, posts, etc.
 122,685

 Storage battery oxides 116,053
 116,053

 Terne metal
 880

 Type metal
 14,657

Misc. Uses:
Annealing
Galvanizing
Lead plating
Weights & ballast...

Estimated unreported

consumption

Other Uses

Total ..... 77,029

Total ..... 131,102

Total ...... 8,731

Unclassified ..... 9,977

Daily average: ..... 3,329 2,771

Chemicals:
Tetraethyl lead . . . . 129,206
Misc. chemicals . . . . 1,896

-1956-

3,073 1,678 1,449 7,663 4,881

813 436 276

13,767 12,209

1,678

57.540

18,050

18,218

687

738

1.000

3.119

Aug.

3,370 2,185 2,194 12,414 6,059

916 768

17,413 17,319

1,914

76.256

1.589

10 427

15,359

15,654

609

1.159

1,438

1.000

3.416

Jan.-Aug. July

89,453 39,992 7,867 7,268 2,786 18,021 20,537 48,066

..... 555,656

#### U. K. Lead Consumption

(British Bureau of Non-Ferrous Metal Statistics)

#### (In tons of 2,240 pounds)

		1954	1955	1956
Jan.		25,786	29,062	31,012
Feb.		25,837	28,926	30,125
Mar.		29,442	33,225	30,099
Apr.		25,820	28,656	28,186
May		28,637	31,092	29,752
June		28,574	32,627	31,501
July		25,968	26,994	26,963
Aug.		25,671	26,954	25,077
Sept.	*****	30,631	34,291	30,274
Oct.		30,123	34,121	
Nov.		30,142	34,820	*****
Dec.		28,840	29,689	

#### American Antimony

Total ...335,887 370,794 .....

#### Monthly Average Prices

in bulk, f. o. b. Laredo				
	(Cents	per lb. in	ton lots)	
	1953	1954	1955	1956
Jan.	34.50	28.50	28.50	33.00
Feb.	34.50	28.50	28.50	33.00
Mar.	34.50	28.50	28.50	33.00
Apr.	34.50	28.50	28.50	33.00
May	34.50	28.50	28.50	33.00
June	34.50	28.50	28.50	33.00
July	34.50	28.50	28.50	33.00
Aug.	34.50	28.50	30.66	33.00
Sept.	34.50	28.50	33.00	33.00
Oct.	34.50	28.50	33.00	33.00
Nov.	33.68	28.50	33.00	
Dec.	28.50	28.50	33.00	
Av.	83.93	28.50	30.18	

\*100,999

114.066

#### Includes lead content of leaded zinc oxide production.

Includes lead content of scrap used directly in fabricated products.

Total Reported ..... \*782,495 \*84,914 \*104,934

8,000

Grand total ..... 790,500 85,900 105,900

#### Consumers' Lead Stocks, Receipts and Consumption (Bureau of Mines - In Short Tons)

Soft lead	Stocks July 31, 1956 67,214 44,898	Net Receipts in Aug. 62,345 24,322	Consumed in Aug. 68,200 27,758	Stocks Aug. 31 1956 61,359 41,462
Lead in alloys	9,683	3,051	3,335	9,399
Lead in copper-base scrap	1,900	1,652	1,706	1,846

91,370

#### Consumption of Lead by Class of Product

(Bureau of Mines - In Short Tons)

#### AUGUST

Metal products	Soft lead 40,259	Antimonial lead 27,175	Lead in alloys 3,321	copper-base scrap 1,706	Total 72,461
Pigments	10,423	4			10,427
Chemicals	15,654				15,654
Miscellaneous	672	347			1,019
Unclassified	1,192	232	14		1,438
Total	68,200	27,758	3,335	1,706	*100,999

<sup>\*</sup> Excludes 3,628 tons of lead which went directly from scrap to fabricated products and 307 tons of lead contained in leaded zinc oxide production.

#### Lead Imports and Exports by Principal Countries (A.B.M.S.)

Reported in pigs, bars, etc.; metric tons ex-cept where otherwise noted.

		- 1956 -	
	June	July	Aug.
IMP	ORTS		
U. S.† (s.t.) 1	4,765	13,092	15,674
Canada (s.t.)	8		
Denmark	606	1,458	930
France	3,554	2,784	6,713
Germany (W.) ‡.		5.642	
Italy††	832	2,065	
Netherlands	3.950	3.229	
Norway	506	420	
Sweden		1,053	
Switzerland	1,469	920	1.907
U. K. (l.t.) 2		11.248	11.583
India* (l.t.)	1,477		
EXP	ORTS		
U. S.† (s.t.)	28	97	1.177
Canada (s.t.)	6.632	9.695	
Denmark	17	317	319
France	351	38	84
Germany (W.) ‡.	5,600	2,678	
Netherlands	1.182	839	
Switzerland		37	44
Northern			
Rhodesia* (l.t.)	1.181	987	
Australia* (l.t.) 1	0,294		

<sup>\*</sup> British Bureau of Non-Ferrous Metal Sta-

#### French Lead Imports

(American Bureau of Metal Statistics) (In Metric Tons)

	1956 -	
JanAug.	July	Aug.
Ore (gross		
	11,496	12,885
Greece 2,717		
Italy 787		
Algeria 3,865	744	1,698
Morocco67,305	9.752	11.187
French Equat.	-,	
Africa 4,031	1.000	
Tunisia 973		
Non-argenti-		
ferous37,011	2,784	6,713
Belgium 3,137	454	1,010
Germany (W.). 3,476	100	600
Spain 100		100
U. Kingdom 661	203	458
Algeria 377	4	310
Morocco12,304	19	2.747
Tunisia16,697	2.001	1.285
Australia 203		203
Other countries. 56	3	
Antimonial lead. 854	41	

#### U. K. Lead Imports

(British Bureau of Non-Ferrous Metal Statistics) (In tons of 2,240 lbs.)

		- 1956 —	
	JanSept	. Aug.	Sept.
(Gross Weight)			
Lead and			
lead alloys	123,242	11,583	19,019
Australia	74,653	7,133	13,794
Canada	32.282	3.350	4.475
Felgium		450	
Yugoslavia		50	150
United States.	951		
Peru		600	600
Other	-,		
countries	3,763		

<sup>1</sup> Based on number of days in month without adjustment for Sundays or holidays. N2

<sup>123,695</sup> \* Excludes 3,628 tons of lead which went directly from scrap to fabricated products and 307 tons of lead contained in leaded zinc oxide production.

Refined.

<sup>‡</sup> Includes scrap. †† Includes lead alloys.

#### **Domestic Zinc Statistics**

American Zinc Institute

Commencing with January, 1948, all regularly operating U. S. primary and secondary smelters are included in this report. Production from foreign ores also is included.

				(Tons of 2	,000 lbs.	)			
	Stock			- Shipm	ents -			Unfilled	Daily
	Begin-	Pro-	Domes-	Export &	Gov't		Stock	Orders	Avg.
	ning	duction		Drawback		Total	at End	at End	Prod.
1950 Tl.	94,221	910,354	849,246	18,189	128,256	995,691	8,884	74,795	2,494
1950 Mo.	Avg.	75,863	70,770	1,516	10,688	82,974	0,000		-,
1951 Tl.		931,833	836,800	32,067	39,949	918,816	21,901	50,509	2.553
1951 Mo.		77,653	69.733	3,506	3,329	76,568		,	
	21,901	961,430	808,343	56,202	36.626	896,171	87,160	45,264	2,627
1952 Mo	. Avg.	80,119	66,945	4,683	8,052	74,681	,		
1953 Tl.	180.843	971,191	818,850	16,326	42,332	877.508	180,843	35,466	2,661
1953 Mo.	Ave.	80,933	68,238	1,361	3,528	73,126		,	
1954		001000	001000	*100"		101200			
Apr.	201,100	70,255	67,512	977	2,489	70,616	200,740	31,702	2,342
May	200.740	73,645	61,859	670	2,037	64,566	209,828	38,624	2,376
June	209.828	71.466	72,257	2,297	5,685	80,239	201,055	33,100	2,385
July	201,124	70,749	59,157	1,475	13,214	73,846	198,027	38,899	2,282
Aug.	198,027	71.810	58,188	1,525	16,871	76,584	193,253	41,059	2,316
Sept.	198,253	60,137	64,548	1.072	12,265	77,885	175,505	48,818	2.004
Oct.	175,505	67,047	78,867	1.468	10,080	90,415	152,187	\$1.559	2.163
Nov.	152,137	80,119	77,074	2,477	18,066	97.617	134,639	44.042	2,671
Dec.	134,639	85,166	75,105	3,405	17,218	95,728	124,077	45.862	2.747
Total	124,277	868,242	787,922	27,929	108,957	924,808	124,077	45,862	
	Avg.	72,353	65,660	2.327	9.080	77,067	204,011		2,379
1955		,	001000	-,0	0,000	,			2,0.0
Jan.	124,277	86,076	70,863	2.644	19.694	93,201	117.152	57,421	2,777
Feb.	117,152	78,977	80,016	3,743	16,205	99,964	96,165	54.527	2,820
Mar.	96,165	89,179	79,720	1.828	12,959	94,507	90,837	60,057	2,877
Apr.	90,837	83,786	89,589	1,967	8,488	100,044	74,597	65,127	2,793
May	74,579	86,177	83,336	3,802	10,434	97,572	63,184	70.087	2,780
June	63,184	84,458	92,212	1.492	5.335	99,039	48,603	57,231	2,815
July	48,603	84,400	76.812	862	4,039	81,713	51,290	64,056	2,738
Aug.	51,290	84.874	87,042	885	2,153	90,080	46,084	73.632	2,738
Sept.	46,084	83,448	83,664	1,274	2,427	87,365	42,167	52,278	2,781
Oct.	42.167	89,449	85,770	36	1.942	87,748	43,868	61,746	2.886
Nov.	43.868	86,616	91,585	280	1,561	93,426	38,058	64,560	2,921
Dec.	38,058	92,578	87,010	684	1,963	89,657	40,979	72,908	2,986
Total	40,979	1 031,018	1,007,619	19,496	87.200	1.114.316	40.979	72,908	
Monthly	Avg.	85,918	83,968	1,625	7,267	92,860	40,010	12,000	2,825
1956				-,	.,	00,000			2,020
Jan.	40,979	90,313	87,723	1.084	1.155	89,962	41,330	60,717	2.918
Feb.	41,330	86,329	84,727	317	2,782	87,826	39,838	45,255	2,977
Mar.	39,833	91,690	84.204	460	6,821	91,485	40,038	53,070	2,958
Apr.	40,038	88,664	74,789	1,437	4,570		47,907	46,106	2,955
May	47,907	81,238	59,085	287	10,196	69,568	59,577	84,003	2,620
June	59.577	78,321	53,048	539	15,085	68,672	69,226	45,921	2,611
July	69,226	83,080	34,219	811	14,501	49,531	102,775	53,559	2,680
Aug.	102,775	89,549	70,707	1.235	16.075	88,017	104,307	55,769	2,889
Sept.	104,307		73,142	934	18,301	92.377	102.165	64,450	3.008
Oct.	102,165	93,493	84,991	465	21,392	106.848	88,810	53,425	3,016

#### U. S. Consumption of Slab Zinc

1	Bureau By Industries	of Mines (Short			
Galvan-	Die	Brass	Rolled	Zinc oxide	
izers	Casters	products		& other	Total
1949 Total348,544	197,387	84,257	55,100	17,643	702,931
1950 Total 434,094	281,385	136,451	67,779	27,656	947,365
1951 Total386,373	266,442	141,456	64,000	28,738	887,009
1952 Total375,563	236,022	155,311	51,508	30,885	849,289
1953 Total403,162	305,346	177.301	53 784	38,037	977.636
1954	000,040	111,000	00,104	00,001	211,000
June 34.827	23,534	8,860	4.214	2,880	74,665
July 33,897	17,214	6.135	3,006	2,712	63,314
August 38,225	19,891	8,349	4,030	2,684	73,529
September 37,591	20,980	8,505	3,153	3,037	73,616
October 36,407	26,051	9,501	4.181	3,055	79,545
November 34,212	30,572	10,573	3.969	2,785	82,461
December 32,263	31,781	10,961	3,350	2,987	81,342
Total398,599	286,817	107,293	45,979	33,342	876,130
1955			,	,	,
January 32,638	32,863	12,313	3,754	3,151	84,719
February 31,601	31,254	10,690	3,912	2,745	80,202
March 37,648	37,682	12,718	4,635	3,305	95,988
April 36,136	36,628	11,034	3,833	3,181	90,812
May 37,471	36,926	12,404	4,203	3,409	94,413
June 37,874	32,821	13,305	5,012	3,227	92,239
July 33,433	23,910	7,017	2,832	2,897	70,589
August 38,317	30,168	10,244	5,431	3,027	87,687
September 39,181	31,804	12,672	4,185	3,507	91,849
October 40,030	35,136	13,961	4,714	3,596	97,940
November 38,116	38,616	13,455	3,952	3,636	98,275
December 37,249	36,982	15,003	3,900	3,621	96,755
Total439,694	404,790	144,816	50,363	39,302	1,081,468
1956					
January 38,148	36,554	13,097	4,442	3,665	95,906
February 37,702	31,274	12,678	3,883	3,325	88,862
March 38,662	31,332	12,889	4,433	3,566	90,882
April 37,092	29,226	12,635	4,010	3,359	86,322
May 38,064	26,003	12,218	3,431	1,260	80,976
June 37,005	21,790	8,351	3,454	1,315	71,915
July 12,960	21,425	5,193	3,187	2,883	45,648
August 33,840	26,814	8,420	4,222	2,959	76,255

METALS, NOVEMBER, 1956

#### Prime Western Zinc Prices

(Cents per pound)

(In Tons of 2,240 Pounds)

	1953	1954	1955	1956
Jan.	12.596	9.76	11.50	13.46
Feb.	11.48	9.375	11.50	13.50
Mar.	11.024	9.66	11.50	13.50
Apr.	11.00	10.25	11.93	13.50
May	11.00	10.29	12.00	13.50
June	11.00	10.96	12.25	13.50
July	11.00	11.00	12.50	13.50
Aug.	11.00	11.00	12.50	13.50
Sept.	10.18	11.44	12.96	13.50
Oct.	10.00	11.50	13.02	13.50
Nov.	10.00	11.50	13.00	
Dec.	10.00	11.50	13.00	
Av.	10.857	10.69	12.305	

#### High Grade Zinc Prices

(Delivered)

N. Y. Monthly Averages

	(Cent	s per p	ound)	
	1953	1954	1955	1956
Jan.	13.946	11.11	12.85	14.81
Feb.	12.83	10.725	12.85	14.85
Mar.	12.379	11.01	12.85	14.85
Apr.	12.35	11.60	13.28	14.85
May	12.35	11.64	13.35	14.85
June	12.35	12.31	13.60	14.85
July	12.47*	12.35	13.85	14.85
Aug.	12.60	12.35	13.85	14.85
Sept.	11.53	12.79	14.31	14.85
Oct.	11.35	12.85	14.37	14.85
Nov.	11.35	12.85	14.35	
Dec.	11.35	12.85	14.35	
Av.	12.207	12.04	13.655	

<sup>\*</sup>East of Continental Divide.

#### U. K. Zinc Consumption

British Bureau of Non-Ferrous Metal

			Stat	tistics		
	(In	Tons	of	2,240	Pounda	1)
		19	54		1955	1956
Jan.		25,6	15	29	,192	29,779
Feb.		25,2	86	28	,814	29,568
Mar.		29,0	01	33	3,451	28,650
Apr.		26,0	84	27	,741	25,348
May		27,5	51	29	,237	27,922
June		29,6	65	31	,467	26,650
July		23,0	12	23	3,695	23,826
Aug.		22,1	02	2	3,261	18,867
Sept.		. 30,4	113	3	0,080	25,470
Oct.		28,5	43	25	9,460	
Nov.		27,9	01	3:	1,516	
Dec.		29,3	344	2	8,683	****
Tot	tal	324,8	17	34	5,597	

#### Mine Production of Zinc Mine Production of Lead Mine Production of Gold in United States in United States (U. S. Bureau of Mines) (U. S. Bureau of Mines)

(In short tons) (In short tons) Central Western Eastern States Eastern Central States States States States 1952 1951 152.258 230.723 390.428 Ttl. 7,426 Total 185,939 94,410 385,652 666,001 1953 Ttl. 11,252 150.302 228,607 390,161 Total 183,612 57,300 293,818 534,730 Ttl. 9.970 136.650 188.776 335,412 1954 Total 166,487 63,100 234,942 464,539 1954 Ttl. 8,608 138,940 169,804 317.352 1955 21,437 5,075 39,636 Feb. 13.124 1955 13,187 12,417 24,840 23,436 25,200 887 17.241 31.315 Mar. 14,679 6,173 45,692 Mar. 43,277 940 15,329 28,686 Apr. May Apr. 13,767 6.074 13,563 13,840 5.842 44,605 987 12,037 15,908 28,932 May 24,044 900 11,918 5,652 43,536 June 15,609 28,427 June 5,340 22,643 41,383 828 July 13,400 July 10,925 14,426 5,868 22,339 22,490 42,633 Aug. 821 12,109 13,883 26,813 Aug. 13,830 5,834 42.154 Sept. 906 11,676 14 294 26.876 Sept. 5,339 22,496 5,532 21,347 5,250 21,721 67,640 273,871 27,564 25,975 27,802 924 15,005 Oct. 13,332 41,167 Oct. 11,635 762 771 Nov. 39,555 Nov. 13 482 39,615 13,628 13,403 Dec. 12,644 Total 162,289 Dec. Ttl. 10.379 177,409 503,800 145,640 333,409 13,830 5.017 21,701 40,548 Jan. 11,633 14,113 Jan. 13,975 5,236 23,460 Feb. 1,006 12,100 14,648 27,754 Feb. 42,671 15,058 5,740 48,108 16,667 31,051 Mar. Mar. 1,152 5,098 25,687 44,957 978 11,948 16,699 29,625 Apr. 14,172 Apr. May 29,848 14,834 5,471 27,133 47,438 May 991 12,497 16.360 29,263 11,492 11,459 16,909 5,228 5,371 26,108 June 13,730 45,066 June 862 25,108 15,781 27,959 43,507 45,759719 July July 25,775 829 17,024 30,613 5.425 14.559 A 110 Aug. 27,318 4,760 24,040 42,367 Sept. 818 10,680 15,820 13.567 Sont \*Includes Alaskan output in some months. \*Includes Alaskan output in some months.

#### Mine Production of Recoverable Silver in United States (U. S. Bureau of Mines)

	(In Fine	Ounces)		
Eastern		Western		
* States	Missouri	States	Alaska*	Total
1953 Total158,707	223,500	36,354,685	39,111	36,776,003
1954 Total142,180	283,600	36,121,368	35,140	36,582,288
1955				
June 13,592	35,350	3,033,664	2,591	3,085,197
July 9,997	32,910	2,331,064	5,098	2,379,069
August 12,360	38,100	2,723,552	5,477	2,779,489
September 11,517	37,180	2,927,151	6,954	2,982,802
October 15,152	35,540	3,145,297	6,704	3,202,693
November 12,476	36,040	2,963,360	4,735	3,016,611
December 11,831	37,556	2,849,045	750	2,899,182
Total159,038	438,000	36,103,723	33,804	36,734,565
1956	200,000	00,100,120	00,00%	00,102,000
January 4,664	30,880	2,869,878	316	2,911,551
February 12,252	32,430	2,967,837	82	3,012,601
	34,370	3,243,598	11	3,294,515
March 16,536 April 6,918	32,050	3,212,308	61	3,251,337
The state of the s	33,300	3,081.054	545	3,128,769
May 13,870	30,610	3,103,654	1.524	3,147,546
June 11,758			4.116	2,754,908
July 17,069	31,160	2,702,563		2,969,632
August 11,073	35,180	2,917,057	6,322	2,909,002
AAAAAAA CO CEETA AAAAA		smelter receip	US.	
**Includes a total of	3,708 oz. from	m Illinois.		

#### Production of Primary Aluminum in the U. S.\* (U. S. Bureau of Mines)

			(0. 10.	Dureau	or minics)			
			(Ir	short	tons)			
	1949	1950	1951	1952	1953	1954	1955	1956
Jan.	54,536	50,023	67,954	76,934	89,895	116,247	128,203	140,394
Feb.	49,749	54,493	62,740	72,374	92,649	110,483	116,236	132,762
Mar.	54,852	58,747	70,022	77,069	104,460	122,339	130,272	145,895
Apr.	54,076	58,024	67,701	76,880	102,071	120,434		144,726
May	56,909	51,929	67,720	80,803	105,464	125,138	131,128	150,800
June	54,184	60,400	67,454	77,476	104,152	120,758		145,726
July	55,777	63,518	72,698	78,368	109,285	126,161	132,669	151,624
Aug.	52,001	63,006	73,816	85,175	110,545			92,406
Sept.	49,742	54,449	69,429	76,882	109,333	120,332	130,606	132,316
Oct.	45,790	62,915	72,647	77,312	108,219	125,089		
Nov.	35,865	62,276	72,246	74,639	105,636	121,252		
Dec.	34,161	65,897	72,454	83,419	110,291	127,056		
Total	603,462	718,622	836,881	937,330	1,252,013	1,460,565	1,565,721	

\*Based on producers' reports to War Production Board to July, 1946. Thereafter to Bureau of Mines. The monthly figures are preliminary in nature and will not add to the totals derived from the Bureau's annual industry canvass.

#### in United States

	(U	. S. Bureau (In fine	of Mines	5)
	astern States	Western	Alaska*	Total
1952 Ttl. 1	,948	1,650,660	233,428	1,886,036
	,529	1,689,668	273,479	1,964,676
	,731	1,577,216	252,794	1,831,741
Apr.	162	145,103	15	145,280
May	144	147,595	7,287	155,026
June	156	139,993	20,668	160,817
July	140	92,322	39,661	132,123
Aug.	171	119,327	40,931	160,429
Sept.	170	139,811	52,153	192,134
Oct.	182	140,812	43,486	184,480
Nov.	168	144,837	35,530	180,535
Dec.	166	143,827	5,000	148,993
Ttl. 2	,026	1,634,625	247,535	1,884,186
Jan.	121	132,919	1,977	135,017
Feb.	154	130,264	866	131,284
Mar.	198	134,331	62	134,591
Apr.	156	136,360	522	137,038
May	175	141,319	4,130	145,624
June	199	139,544	12,312	152,055
July	45	126,204	31,515	157,764
Aug.	178	133,431	45,452	179,061
*Ala		otals based	on mint a	and smelter

#### U. S. Silver Production\*

	(A.B.M	.S.)	
(ln thousan bars, 0.999 f	ds of ou	inces; com	mercial
bars, 0.999 f	Dom.+	For.	Total
1952 Total		36,653	
1953 Total	34,697		72,461
	38,059		
1954 Total	38,038	39,422	77,481
1955	0.550	0.051	F CO.4
February		2,851	5,604
March		2,780	6,340
Apr		2,896	5,964
May		2,224	5,299
June		3,134	6,223
July	596	930	1,526
August	2,005	1,669	3,674
September .	2,840	2,855	5,695
October		3,889	6,321
November .	3,087	2,775	5,862
December .		3,652	6,832
Total		32,780	65,881
1956	00,202	02,100	00,000
January	3,249	4,159	7,408
February	3,615	4,033	7,648
March		3,550	7,340
April		3,191	6,089
May		3,709	6,614
June		2,248	4,749
		2,838	6,666
July		3,818	6,853
August		3,002	
September			5,830 f foreign
<ul> <li>The separat and domestic</li> </ul>	origin on		of refined
have and of	han mafina	d forme is	only on

bars and other refined forms is only ap-proximate. Includes purchases of crude silver by the U. S. Mint.

#### Average Silver Prices

~	rciay	2 3114	CI LIII	C3
	(Centi	per fine	e ounce)	
	1953	1954	1955	1956
Jan.	84.44	85.25	85.25	90.357
Feb.	85.25	85.25	85.25	90.90
Mar.	85.25	85.25	85.25	91.138
Apr.	85.25	85.25	87.08	90.875
May	85.25	85.25	88.928	90.75
June	85.25	85.25	89.71	90.46
July	82.25	82.25	90.49	90.14
Aug.	85.25	85.25	90.75	90.614
Sept.	85.25	85.25	90.795	90.75
Oct.	85.25	85.25	91.794	90.722
Nov.	85.25	85.25	91.46	
Dec.	85.25	85.25	90.45	
Ave.	85.183	85.25	89.116	
Note	- The	averages	are based	on the
price of	refined	bullion in	nported on	or after

August 31, 1942. METALS, NOVEMBER, 1956

#### U. S. Copper Imports

(A.B.M.S.) (Bureau of the Census) (In tons of 2,000 lbs.)

(	,	-1956-	
	JanAug.	July	Aug.
Ore, matte &			
reg. (cont.)	86,244	10.982	17,755
Canada	18.251	3.976	4.131
Mexico	8 344	805	813
Cuba		95	2.131
Bolivia	2,421	828	145
Chile	12,768	2,104	1.317
Down	8.087	1,538	302
Peru	0,007		
Cyprus	4,655	000	2,482
Philippines	8,737	820	2,600
U. of S. Africa.			3,408
Australia			192
Other countries	346	35	234
Blister copper			
(content)	159.416	21,003	22,391
Canada	1.038		
Mexico		3.844	3,259
Chile		11,575	
Peru		1,482	782
Belg. Congo	4,346	543	
Deig. Congo	10.056	560	1 100
N. Rhodesia		200	1,120
U. of S. Africa.			1,000
Turkey	3,271		
Australia		2,444	859
Refined cathode			
and shapes	132,603	16,782	17,373
Canada	57,961	8,840	8.384
Mexico			331
Chile	31,107	3.298	2.649
Peru	14,329	1.651	1,851
Belgium	769		218
Germany (W.)	2.738		
Morrison W.	4,500	700	200
Norway	224		
Sweden			
U. Kingdom		56	
Yugoslavia			
Belg. Congo		593	940
N. Rhodesia		1,644	2,800
Japan	. 800		
Total Imports:			
Crude and ref	.378,263	48,767	57,519
In rolls, sheets			
or rods	6,149	643	265
Old and scrap		0.10	
(content)	. 3.822	246	191
Composition	. 0,022	240	101
	. 38	3	
metal (cont.)	. 30	3	
Brass scrap &	0.450	011	0.00
old (cu. cont.	3,459	311	268
		-	

#### U. S. Zinc Exports (A.B.M.S.) (Bureau of the Census) (In tons of 2,000 lbs.)

(In tons of 2,000 I	1956 -	
JanAug.		
Ore, conc. (cont.)		
Slabs, blocks, etc. 5,702	629	602
Canada 3	3	
Mexico 400	110	
Cuba 59		5
Brazil 32		
Chile 96		58
Belgium 840	112	168
Germany (W.) 112		
Netherlands 14		
U. Kingdom 3,696	336	336
Korea 411	63	31
India 2		2
Other countries. 37	5	2
Scrap: Ashes,		
dross & skim. 10,671	591	345
Rolled in sheets,		
plates & strips 3,575*	143	317
Alloys ex brass		
and bronze	42	14
Die castings	76	86
Battery shells &		
parts, unassem-		
bled	25	69
Chromite zinc		
sheets, mold,		
castings, pat-		
tern plates,		
forms, n.e.s	48	5
METALS, NOVEMBER, 1956	-	
MEIALS, NOVEMBER, 1936		

#### U. S. Copper Exports

(A.B.M.S.) (Bureau of the Census)

_			
(In tons	of 2,000 lb	s.)	
	JanAug.	1956 - July	Aug.
Ore, conc., matte			
and other un-			
ref. (cont.)	2,397	664	
Refined ingots,			
bars, etc.†	121,298	9,251	18,167
Canada		50	148
Brazil	4,553	690	666
Austria	168		
Belgium	34		
Denmark	5	5	
France	44,709	1,928	
Germany (W.)	19,331	1,801	1,625
Italy	11,759	1,779	2,154
Netherlands	3,695		336
Norway	1,415		15
Sweden	766	173	173
Switzerland	8,631		950
U. Kingdom	4,213	597	968
Formosa	967		772
India	7,242	616	866
Japan		1,565	3,002
Other countries	634	47	18
Total Exports:			
Crude and			
refined	123,695	9,915	18,167
Pipes & tubes	1,846	259	209
Wire, bare		728	448
Building wire			
and cable‡	2,477	270	158
Weatherproof			
wire‡		71	110
Insulated copper			
wire n.e.s.‡	9,914	1,224	890

† Includes exports of refined copper resulting from scrap that was reprocessed on toll for account of the shipper.

\$\$i\$ Gross weight; n.e.s.—not elsewhere specified.

Includes plates, sheets, rods, brush copper, castings, rolls, segments (finished forms) n.e.s.

#### U. S. Copper Scrap Exports

(A.B.M.S.) (Bureau of the Census)

(In tons	of 2,000 lb	s.)	
		1956-	
	JanAug.	July	Aug.
Copper scrap, un	-		
alloyed† (new			
and old)	.14,245	1,436	1,583
Canada	. 3,271	6	
Belgium	176	27	
Germany (W.).	. 4,725	572	376
Netherlands	. 187	64	28
Switzerland	. 232		55
India	. 60	22	22
Japan		745	1,102
Other countries	. 69		
Copper-base scr	ap,		
alloyed‡ (new			
and old)	. 31,896	5,309	3,872
Canada	. 410	25	42
Mexico	. 2		2
Austria	. 291		
Belgium	. 84		84
Germany (W.)	13,091	2,343	1,121
Italy	. 2,877	739	655
Netherlands		73	49
Spain	. 72	27	45
Switzerland	. 225	112	28
U. Kingdom	. 372	11	5
India		461	449
Japan	.12,263	1,509	1,343
Other countries		9	49

† Ash, brass mill, clippings, dross, flue dust,

residues, scale, skimmings, wire scrap.

Copper-base alloys, including brass and bronze

-Ashes, clippings for remanufacture, cupronickel scrap, cupro-nickel trimmings, nickel silver scrap, phosphor bronze, phosphor copper, skimmings, turnings, round.

#### U. S. Lead Imports

(A.B.M.S.) (Bureau of the Census)

		1956-	
Jan	Aug.	July	Aug.
Ore, matte,			00 500
	,932	15,868	
	,798	2,996	2,976
	,453	488	292
	,781	784	
	,045	374	
	2,118	2,060	1,541
Chile	76		55
Colombia	625		255
	,718	4,102	4,609
	0.937	1,238	
Australia 17	7,396	3,613	569
	.441	163	
	367	50	65
Other countries	177		31
Pigs and bars 149		13,092	
	9,997	932	1.036
	2,694	3.534	5,079
	0,582	2.850	
	1.096	176	
	1,111	114	228
Germany	168		
	3.939	1,102	***
	115		
		55	3.572
	6,389	99	3,312
	5,626	4 200	0.055
	7,340	4,329	3,957
	221		
Total Imports:			
Ore, base			
bullion, ref 28	6,210	28,960	36,264
Lead, scrap, dross,			
etc. (cont.) 1	8,632	684	681
Antimonial lead			
& typemetal	7,419	391	1,307
Lead content			
thereof	6 617	288	1,148

#### U. S. Zinc Imports (A.B.M.S.) (Bureau of the Census)

(In tons	(In tons of 2,000 lbs.)				
	JanAug.	July	Aug.		
Zinc ore					
(content)	355,425	41,955	50,462		
Canada	119,732	14,055	18,496		
Mexico	128,841	15,708	20,232		
Cuba		60	145		
Guatemala	8,371	1,675	756		
Honduras	1,759	126	349		
Bolivia	5,507	1,322	80		
Colombia			29		
Chile	77		8		
Peru	68,488	5,786	8,476		
U. of S. Africa	4,103	182	1,465		
Australia	15,676	3,013	18		
Philippines	402	24	19		
Other countries		4	389		
Zinc blocks,					
pigs, etc	113,770	12,631	14,179		
Canada		6,407	7,938		
Mexico	9,338	1,620			
Peru	4,313	600	430		
Austria	1,849				
Belgium	14,805	1,572	2,025		
Germany (W.)		335	723		
Italy	5,063	358	1,864		
Netherlands .	660	112			
U. Kingdom	. 500				
Belg. Congo	9,293	507	369		
Australia		1,120			
Japan	. 1,273				

#### Comparative Metal Prices

•	OPA	
1939		
Av	. Av.	1956
Copper Domestic		
(Electro, Del. Valley .11.2	0 14.375	36.00
Lead (N. Y 5.0		36.00
P. W. Zinc (E. St. Louis,		
f. o. b.) 5.0	5.05	13.50
New York, del		14.00
Tin, Spot Straits, N. Y		112.75
Aluminum Ingot 99% + 20.0		27.16
Antimony (R.M.M, brand,		
f o b Laredo) 12.3	14.50	33.00

#### World Production of Copper (American Bureau of Metal Statistics)

									000 Pour		LO					
		United States	Canada	Mexico (crude)	Chile	Peru	Fed. Rep. of Germany	Norway	United Kingdom	Yugo- slavia	India	Japan	Turkey	Aus- tralia	Northern Rho- desia	Union of South Africa
1951		(a)	(b)	(c)	(d)	(d)	(e)	(f)	(g-h)	(c)	(f-h)	(e)	(f)	(e)	(c)	(d)
Total	١.	 964,589	269,971	60,511	396,937	25,495	234,647	*****	*****	*****		100,254	****	16,984	349,667	36,104
Total	١.	 961,886	258,868	60,874	422,498	22,640	206,747	11,206	163,968	36,176	7,009	104,060	2,546	21,119	336,883	87,459
Potal	1 .	 957,318	253,652	63,380	371,742	25,803	233,330	13,306	108,604	34,381	5,709	100,381	25,641	37,080	382,884	38,341
Total	١.	 863,721	302,984	59,030	372,814	29,233	258,259	14.205	152,858	33,394	8,274	117.371	27,727	42,241	386,577	43,158
Apr. May June July Aug. Sept.		 93.669 95,042 90,645 31,846 67,990 96,343	25,202 25,718 27,465 26,481 27,844 27,502	4.946 4.677 5.402 5.425 4.829 4.745	38,510 38,735 38,164 35,081 36,949 30,914	2,434 2,616 2,635 2,738 2,613 2,544	24,951 24,642 23,639 23,841 24,944 24,096	1,433 1,228 1,231	8,355 11,772 14,837 9,418 10,946 11,396	2,252 2,487 3,045 3,200 2,976 2,793	740 743 718 717 763 682	10,906 8,096 5,655 10,810 11,623 11,657	1,335 1,953 2,252 2,305 1,623	4,114 4,501 4,308 4,300 4,760	33,467 35,301 35,166 34,306 28,942 33,087	4,468 4,639 2,700 4,548 4,787 4,411
Oct. Nov. Dec. 1956		 99.514 94,287 <b>93</b> ,186	27.783 27.392 <b>82.850</b>	5,816 5,999 <b>5,601</b>	37,427 40,699 19,232	2,055 2,554 2,610	23,317 24,143 22,973	1,439 1,308	10,806 12,728 13,871	2,151 2,544 2,794	694 782 814	11,543 11,868 11,872	2,552 3,010 2,301	3,770 4,826 1,804	36,149 28,749 31,676	4,368 3,844 4,068
Jan. Feb. Mar. Apr. May June July Aug.		 89,326 102,459 98,578 101,422 98,496 84,787 91,282	30,063 26,867 31,659 27,804 29,422 29,066 31,098	6,040 4,965 7,107 6,436 5,801 5,614 5,109 5,357	30,478 37,420 38,356 39,731 39,954 36,812 40,880 44,202	593 2,492 2,500 2,474 2,612 2,412 2,602 2,523	23,826 21,106 23,838 22,593 23,134 23,920 24,383 23,938	1,259 1,322 1,402 4 5 1,413 1,186	14,597 11,437 12,281 8,154 10,217 9,715 12,223 6,733	2,436 1,872 2,313 1,660 3,103 3,018 3,197	456 792 821 761 755 687 740 782	11,133 11,029 10,390 9,927 11,923 12,490 12,570 12,443	1,898 2,477 3,074 2,355 2,443 2,628 1,044	3,985 4,331 5,991 5,443 4,477 4,461	32,887 33,545 32,535 30,789 33,577 33,640 33,279 33,720	3,808 2,924 8,778 3,105 4,835 4,461 3,090
Sept.		 88,885		5,609		****									23,992	

(a) Reported by Copper Institute. Crude, "recoverable contents of mine production or smelter production or shipments, and custom intake".

Does not include intake of scrap nor of imported ore except that received from Cuba and Philippines. (b) Blister copper plus recoverable copper in concentrates, matte, etc., exported. (c) Crude copper, i. e., copper content of blister or converter copper as originally produced in the several countries, although some of it may be refined at home; e. g., in Rhodesia. (d) Blister and/or refined. (e) Refined. There are quantities of scrap included in the electrelytic production in addition to that reported, tonnage of which is not obtainable. (f) Smelter production, (g) Refinery production from imported blister only. (h) British Bureau of Non-Ferrous Metal Statistics. \*Refined.

					W		rican	uction Bureau ons of	of M	etal St	atistic						
1951		United States	Canada	Mexico	Peru	Belgium			Italy	Spain		Japan	Aus- tralia (a)	French Moroco	Tunisia	Rho- desia	Total
otal		486,874	162,712	219,352	48,824	77,873	53,831	170,766	39,683	45,460		18,516	217,301	20,287	25,476	15,646	1,602,60
otal 953	******	532,778	183,889	248,551	58,536	88,139	59,607	152,751	38,504	46,060	74,053	20,882	217,298	31,224	28,264	14,112	1,783,64
otal 954	******	583,883	166,356	225,075	66,520	84,162	60,887	164,077	40,786	53,799	78,038	25,513	241,419	29,970	30,397	12,891	1,813,77
otal		551,618	166,379	231,595	63,785	79,260	71,033	162,773	61,150	62.475	73,555	37,612	260,424	29,417	30,015	16,800	1,877,84
ay ine ily ig. opt. ct. ov.	*******	48,133 23,850 36,912 50,453 53,747 52,623	13,886 14,061 7,237 11,492 14,828 15,326 12,587	21,840 18,189 17,255 19,301 18,382 17,225 17,576	6,364 5,442 5,598 6,629 8,328 6,760 6,473	6,642 6,249 7,120 7,638 9,032 8,777 8,468	7,601 7,048 8,108 4,826 6,558 7,044 5,891	13,676 11,363 10,077 10,845 13,910 15,387 17,503	3,200 3,169 4,117 2,579 3,805 4,828 3,741	6,254 5,929 4,844 4,357 6,421 5,709 6,133	6,334 7,288 7,758 7,047 5,687 6,260 7,799	2,814 2,087 3,724 8,860 8,851 3,579 3,785	26,531 21,427 15,930 23,682 25,833 21,946 18,820	2,025 4,957 3,746 2,976 3,236	1,192 1,903 2,281 2,541 2,706 1,944 2,535	1,792 1,680 1,680 1,680 1,680 1,568 1,456	163,58 158,67 118,34 144,68 171,20 169,10
ec.	******		12,553	18,637	7,088	8,030	6,730	16,806	4,031	5,267	7,208	3,946	21,113	1,414	3,790	1,456	168,46
	*******	49,475 54,174	11,469 12,438	17,587 16,510 17,376	1,730 6,497 <b>6,142</b>	8,731 9,446 9,338	7,014 6,241 6,383	16,218 15,743 14,562	3,722 3,688 3,164	5,399 5,202 5,319	6,210 4,708 7,187	3,929 4,239 4,009	24,196 16,392 19,535	4.572 3.505	2 070 1,307 2,500	1.4°6 1,232 1,680	167.3° 157.1° 167.7-
lay une uly	*******	47,961 47,367 48,479	11,554 11,990 11,591	15,186 17,611 18,091 18,515	6,790 6,970 6,779 6,415	8,650 9,188 9,481 9,965	6,276 6,814 6,704 6,377	14,398 14,022 14,302 12,165	3,799 4,511 3,100 3,887	6,118 5,660 4,767 5,195	7,159 5,786 7,286 7,827	4,136 4,142 3,972 4,202	17,407 15,984 19,664 27,935	2,876	2.273 2.372 2.064 1.841	1,456 1,456 1,456 1,456	161 3: 156,5: 157,8:
ug. ept.		53,530	d to Aust	18,890 18,567 ralia incl	6,192 6,378 udes lea	d refined	1,896 l in En	11,586 gland from	n Austi	alian ba	se bulli	4,146 on.	,,,,,,	4,151	1,933	$\frac{1,400}{1,232}$	

						(Amei	d Pro	ureau	of Me	tal Sta	tistics						
	United States (a)	Can.	Mexico	Peru (b-c)	Beigium	France	Fed. Rep. of Germany		Italy		Norway (b)	Spain	Yugo- slovia	Japan (a)	Aus- tralia (b)	Rho- desia (b)	Total (d)
1951 Fotal 1952	931,833	218,548	57,990	1,003	220,479	82,184	155.024	78,101	52,058	24,924	44,971	23,444		62,109	88,103	25,301	2,065,21
Total 1953	961,430	223,140	61,456	5,491	205,909	88,255	162,272	76,981	60,438	28,555	43,061	23,329	15,943	77,203	97,931	25,637	2,141,08
Total	971,191	247,707	59,689	9,819	213,215	89,218	163,430	81,436	65,730	27,721	42,566	24,152	16,037	86,833	101,008	28,370	2,228,01
Total 1955	868,242	218,810	60,477	16,982	234,896	122,248	184,806	90,987	14.356	28,686	48.768	25,109	15,040	112,292	117,066	29,736	2,243,50
June July Aug.	84,458 84,400 84,877 83,448	20,565 21,769 22,029	5,297 5,168	1,725 1,880	19,837 19,561 19,190	10,715 10,463 10,185	16,476 16,918 16,566	6,480 5,902 6,751	6,480 6,802 7,098	2,628 2,737 2,529	3,854 4.238 4,422	2,227 2,251 2,197	1,285 1,338 1,175	7,141 11,223 11,012	8,837 10,413 10,089	2,604 2,660 2,576	202,44 207,69 207,73
Sept. Oct. Nov. Dec.	89,449 87,616 92,578	20,898 22,206 21,398 21,133	5,212 5.066		18,863 19,345 19,244 20,079	7,603 10,262 9,848 10,332	16,496 16,735 15,708 17,061	8.609 6,940 7.442 9,316	6,323 6,906 6,183 6,420	2,621 2,735 2,846 2,886	4,451 4,704 4,501 4,432	2,121 2,243 2,185 2,258	1,198 1,176 1,142 1,147	11,227 11,644 11,600 11,654	9,817 9,972 9,860 9,972	2,464 2,604 2,576 2,632	202,86 213,67 210,26 220,04
l956 Jan. F <b>eb.</b> Mar.	90,313 <b>86,329</b> 91,690	21.696 20,356	4,949	963	20,359 20,589	9,911	16,827 15,598	6,768 7,684	<b>6,315</b> 5,799	2,786	4,845 3,961	2,219 2,038	1,146	15,928	9,753 8,982	2,688	222,28
Apr. May	88,664 81,238	22,010 21,339 21,790	5,207 5,248	1,980 1,220 1,225	20,710 20,687 21,300	9,491 10,819 11,174	16,839 16,689 17,212	9,351 7,382 6,719	6,355 6,613 7,190	2,853 2,693 2,662	4,331 4,002 4.168	2.166 2.172 2,226	1.236 1.222 1.289	11,702 13,806 13,401	9,572 0,243 10.012	2,688	224,82 218,36 214,19
June July Aug.	78,321 83,080 89,549	20,780 21,691 21,354	5,198 5,154	1,285 1,427	21,030 21,015	11,003 10,679 10,846	16,898 17,964 17,633	8.857 6.617 6.925	6,270 6,433 6,995	2,530 2,637 2,543	4,427 4,688 4,826	2.175 2.047	1,282 1,325	12,466 13,089 12,374	8,606 11,141	2,632 2,800 2,464	208,63
Sept.	90,235 Partiall	20,691 y electr			irely elec	trolytic.	(c) Begi	9,130 nning	1954 both	2,452 h electro	4,487 lytic and	d electr	othemic.	(d) Th	e above	2.744 totals omit	

#### U. K. Virgin Copper Stocks

(In long tons)
British Bureau of Non-Ferrous Metal
Statistics

At st	art of	: 1954	1955	1956
Jan.		55,344	61.480	76,197
Feb.		60,402	62,771	79,377
Mar.		60,084	70,185	71,634
Apr.		47,258	67,566	73,776
May		60,118	60,767	76,481
June		65,314	58,546	71,713
July		68,037	64,256	76,188
Aug.		67,307	99,628	68,197
Sept.		77,323	107,261	72,069
Oct.		72,266	93,681	62,327
Nov.		61,484	75,533	
Dec.		61,673	77,749	

## U. K. Refined Lead Stocks British Bureau of Non-Ferrous Metal Statistics

		A common contrador		
At st	art of	(In long : 1954	tons) 1955	1956
Jan.		26,887	31,173	40,987
Feb.		32,653	32,274	34,326
Mar.		30,697	39,461	29,693
Apr.		28,312	37,587	33,974
May		30,005	45,226	29,479
June		29,793	38,760	30,537
July		30,437	30,816	37,088
Aug.		29,492	32,270	35,432
Sept.		26,298	48,036	35,793
Oct.		29,958	42,912	39,391
Nov.		22,269	42,061	
Dec.		26,937	38,410	

#### U. K. Stocks of Zinc (British Bureau of Non-Ferrous Metal Statistics)

		15 of 2,2		Conc.
		Zinc	Zinc.	Conc.
At sta	irt of:			
	1955	1956	1955	1956
Jan.	49,962	49,962	47,200	54,447
Feb.	48,027	45,239	43,779	49,537
Mar.	45,679	44,288	44,176	48,667
Apr.	49,301	49,194	51,603	40,502
May	53,573	49,129	47,741	36,524
June	50,447	47,226	47,791	40,136
July	48,227	47,664	47,399	40,763
Aug.	54,562	49,169	50,649	47,972
Sept.	60,935	51.946	55,350	57,125
Oct.	60,800	50,978	55,234	55,354
Nov.	54.679		60,065	
Dec.	50,678		58,414	

#### U. K. Copper Imports

(British Bureau of Non-Ferrous Metal Statistics) (In tons of 2,240 lbs.)

(211	01 2,210 1	1956 —	
	JanSept	. Aug.	Sept.
(Gross Weight)			
Copper and			
copper alloys	290,341	33,087	26,041
U. of S. Africa	945	51	250
N. Rhodesia	171,335	18,232	14,559
Canada	43,371	3,933	5,864
Belgium	3,265	355	12
Germany (W.)			696
Norway		1	100
United States.		585	868
Chile	52,391	9,130	2,901
Peru		150	150
Belg. Congo		525	600
Other			
countries	3,709	18	41
Of which:			
Electrolytic	182,722	21,861	16,367
Other refined.	26,330	2,552	1,700
Blister or			
rough	78,784	8,642	7,538
Wrought and			
alloys	2,505	32	436
Total	290,341	33,087	26,041

Copper Consumption in United Kingdom British Bureau of Non-Ferrous Metal Statistics

	(In tons	of 2,240	pounds)		
	Unalloyed	Alloyed*	Total	Virgin	Scrap
1953 Total	243,717	192,337	447,260	322,311	124,949
1954 Total		251.989	580,138	448,413	131,725
1955					
April	26,101	22,045	48,146	36,008	12,138
May	31,107	23,297	54,404	39,485	14,919
June	36,163	23,904	60,067	45,367	14,700
July	26,601	19,698	46,299	31,749	14,550
August	24,731	18,390	43,121	33,255	9,866
September		24,007	60,293	47,180	13,113
October		25,276	61,585	47,519	14,066
November		25,854	61,645	48,690	12,955
December		23,108	56,061	41,130	14,931
Total	377,576	281,953	659,529	496,467	163,062
1956					
January	34,567	24,461	59,028	45,676	13,352
February		24,163	57,376	40,934	16,442
March	32,903	24,366	57,269	43,913	13,356
April		21,029	48,518	36,418	12,100
May		22,295	52,140	41,747	10,393
June		21,810	55,584	43,622	11,962
July	31,752	19,316	51,086	39,149	11,919
August		14,434	38,860	30,065	8,795
September	35,203	19,584	54,787	45,807	8,980
*Includes copper sulp	hate effective	October, 195	14.		

#### U. K. Zinc Imports

#### Zinc Imports and Exports by Principal Countries

(British Bureau of Non-Ferrous Metal

(In tons o		lbs.) - 1956 —		Reported in pigs, bars, etc.; metric tons ex				
		. Aug.		cept where otherwise noted.	<b>—</b> 1956 <b>—</b>			
(Gross Weight)				June	July	Aug.		
Zinc ore and				IMPORTS				
concentrates .1	38.415	28.558	15.172	U. S. (s.t.)10,691	12,631	14,179		
Zinc conc		16.078	+	Canada (s.t.) 31		* * *		
Australia		12,885		Denmark 332	132	525		
Italy				France 1,358	407	542		
N. Rhodesia		3.152		Germany, W.† 4,068	6,092			
Zinc and		-,		Italy 744	45			
zinc alloys	96.255	10.197	8.892	Netherlands 904	935			
N. Rhodesia		450	250	Sweden 2,320	929			
Australia			600	Switzerland† 1,420	1.367	1.171		
	40.672	5,292	4.893	U. K. (l.t.)10,638	12.281	10,197		
Belgium	13,804	1,287	1,482	India* (l.t.) 4,054				
Germany (W.)		1	3	EXPORTS				
Netherlands	2.239	550	77	U. S. (s.t.) 647	629	602		
Norway	550			Canada (s.t.)15,296	15,499			
United States .	6,520	600		Denmark		105		
Other				France 2		52		
countries	20,233	2,017	1.587	Germany, W.† 3,411	3,771			
Of which:				Italy 1,560	1,005			
Zinc or spelter.				Netherlands 548	786			
unwrought in				Norway 2,261	3,389			
ingots, blocks,				Switzerland† 695	444	189		
bars, slabs and				U. K.t (l.t.) 251	377	284		
	95,723	10,185	8,862	Northern		-		
Other	532	12	30	Rhodesia* (l.t.) . 2,795	1.824			
Total		10,197	8,892	Australia* (l.t.) . 3.624				
4 Duitich Danners of M				Belg. Congo 3.111				

† British Bureau of Non-Ferrous Metal Statistics. The estimated zinc content is not the content of the gross weight as officially reported for any comparable period. Not available.

† Includes scrap. ‡ Includes manufactures. \* British Bureau of Non-Ferrous Metal Statistics.

United Kingdom Tin Statistics
(British Bureau of Non-Ferrous Metal Statistics)

		ent of Tin		a crroa		Tin Metal		
	Imports	Produc- tion*	Stock at end of period*	Imports	Produc- tion*	Con- sump- tion	Exports & Re-exports	Stock at end of period
1954 Total	27,494	940	2,473	2,404	27,475	21,889	8,585	4,847
August	2,163	78	2,300	10	2,545	1,576	733	3,512
September		97 90	1,800 2,349	15 35	2,283	1,920 1,866	981 1,097	3,053 2,368
November	9 000	86 71	2,878	436 155	2,421 2,233	2,081	57 <b>7</b> 528	2,935
1955 Total		1,034	2,181	1,227	27,241	22,390	8,924	2,999
January	1,548	110	1,194	14	2,493	1,881	704	8,236
February		88	2,384	129	1,769	2,082	793	2,671
March	2,526	94	2,705	730	2,452	1,825	237	3,804
April	2,045	76	2,341	155	1,924	1,692	475	3,638
May	1,650	81	1,861	39	2,455	2,301	1,013	3,438
June	1,647	74	1,240	69	2,060	1,797	457	3,424
July	3,100	111	2,240	173	2,082	1.854	405	3,460
August			PP2 - C24	20	D	1.573	533	

\*As reported by International Tin Study Group. Production of Tin Metal includes production from imported scrap and residues refined on toll. Stocks exclude strategic stock but include official warehouse stocks.

#### Canada's Copper Output

(Dominion Bureau of Statistics)

		fined Co		
	1953	1954	1955	1956
Jan.	21,830	15,001	22,678	26,739
Feb.	21,075	13,954	21,533	26,321
Mar.	22,432	21,075	25,181	26,830
Apr.	21,747	20,412	24,221	26,732
May	20,179	23,012	23,921	27,743
June	18,384	23,344	21,981	27,215
July	19,996	21,582	21,286	27,394
Aug.	19,886	22,000	26,424	29,371
Sept.	16,777	22,684	24,943	
Oct.	17,675	21,661	25,658	
Nov.	17,101	22,981	25,340	
Dec.	18,703	24,935	27,312	
Year	235,787	252,643	290,478.	

#### Canada's Lead Exports

(Dominion Bureau of Statistics)

		(In Pigs	()	
		(In Tons	()	
	1953	1954	1955	1956
Jan.	11,212	6,170	5,500	4,888
Feb.	8,710	7,560	11,882	3,856
Mar.	14,943	11,092	10,318	4,007
Apr.	14,765	9,606	11,967	7,636
May	7,039	11,483	6,416	7,214
June	13,434	12,018	9,897	6,632
July	1,357	13.152	8,341	9,696
Aug.	8,869	8,646	4,884	4,713
Sept.	3,903	10,045	5,538	
Oct.	7,532	8,005	8,053	
Nov.	6,581	10,817	4,622	
Dec.	4,354	7,815	5,286	****
Year	102,879	116,409	92,704	

#### Canada's Silver Exports

(Dominion Bureau of Statistics)

(	In ores an	d concentr	ates)
	(Fine	Ounces)	
	1954	1955	1956
Jan.	547,951	429,704	435,047
Feb.	567,225	457,261	196,803
Mar.	849,502	411,597	328,857
Apr.	572,059	493,578	348,838
May	660,724	445,054	447,710
June	682,906	592,238	495,742
July	1,210,045	285,350	686,209
Aug.	953,379	644,932	1,080,301
Sept.	605,188	636,992	
Oct.	612,874	684,301	
Nov.	606,274	387,147	
Dec.	804,213	405,719	
Year	8.672.340	5.873.873	

#### Canada's Copper Exports

(Dominion Bureau of Statistics)

(In	gots, bar	rs, slabs	and bi	llets)
		(In Ton	s)	,
	1953	1954	1955	1956
Jan.	7,668	9,081	11,078	15,981
Feb.	16,411	8,385	12,897	11,041
Mar.	10,578	11,671	12,423	12,276
Apr.	11,153	11,218	10,321	14,476
May	14,726	18,407	10,911	12,851
June	15,053	14,877	13,387	10,985
July	13,939	15,467	12,674	13,599
Aug.	7,272	14,158	13,219	14,710
Sept.	8,139	14,069	13,479	
Oct.	8,957	11,528	14,208	
Nov.	9,062	13,372	14,545	
Dec.	9,036	13,897	14,057	
Year	131,994	156,130	153,199	

#### Canada's Zinc Output

(Dominion Bureau of Statistics)

	*	efined Z		
	1953	1954	1955	1956
Jan.	18,370	17,155	22,028	21,696
Feb.	18,677	15,199	19,865	20,356
Mar.	20,693	16,550	22,215	22,010
Apr.	20,003	16,249	21,301	21,339
May	20,090	16,530	21,599	21,790
June	20,589	17,017	20,565	20,780
July	21,595	17,917	21,769	21,691
Aug.	21,703	18,755	22,029	21,354
Sept.	21,157	18,023	20,898	
Oct.	21,888	18,871	22,206	
Nov.	21,051	19,662	21,398	
Dec.	21,899	21,922	21,135	
Year	247,707	213,810	257,008	

#### Canada's Silver Output

(Dominion Bureau of Statistics)

	_		
	(In	Ounces)	
	1954	1955	1956
Jan.	2,603,593	2,182,386	2,280,575
Feb.	2,068,740	1,960,506	2,094,467
Mar.	2,352,392	2,413,591	2,296,504
Apr.	2,745.615	2,304,287	1,759,384
May	2,564,919	2,235,620	2,463,374
June	2,769,694	2,461,675	2,493,786
July	2,717,859	2,385 654	2,265,824
Aug.	2,840,385	2.480,607	2,312,134
Sept.	2,804,384	2,386,385	
Oct.	2,461,823	2,371,890	
Nov.	2,823,719	2,088,991	
Dec.	2,364,826	2,388,627	
Year	31,117,949	27,696,319	
	Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.	1954 Jan. 2,603,593 Feb. 2,068,740 Mar. 2,352,392 Apr. 2,745,615 May 2,564,919 June 2,769,694 July 2,717,859 Aug. 2,840,385 Sept. 2,804,384 Oct. 2,461,823 Nov. 2,823,719 Dec. 2,364,826	Jan.         2,603,593         2,182,386           Feb.         2,068,740         1,960,506           Mar.         2,352,392         2,413,591           Apr.         2,745,615         2,304,287           May         2,564,919         2,235,620           June         2,769,694         2,461,675           July         2,717,859         2,385,654           Aug.         2,840,385         2,480,697           Sept.         2,804,384         2,386,385           Oct.         2,461,823         2,371,890           Nov.         2,823,719         2,088,991           Dec.         2,364,826         2,388,627

#### Canada's Lead Output

(Dominion Bureau of Statistics)

	(Reco	verable	Lead) *	
		(In Tons	)	
	1953	1954	1955	1956
Jan.	19,502	17,716	18,959	16,002
Feb.	16,888	16,863	15,018	14,344
Mar.	14,183	17,104	19,113	16,857
Apr.	18,640	19,452	17,889	11,573
May	16,120	19,953	16,808	15,446
June	15,302	18,988	17,800	18,145
July	11,969	19,164	16,650	15,841
Aug.	13,864	18,237	16,676	16,104
Sept.	14,335	17,066	15,972	
Oct.	16,327	16,569	13,658	
Nov.	19,433	18,365	15,182	
Dec.	19,273	19,093	17,857	
Year	195,836	219,280	201,583	

#### Canada's Zinc Exports

(Dominion Bureau of Statistics)

	(Slabs in Tons)				
	1953	1954	1955	1956	
Jan.	17,478	16,625	22,181	15,550	
Feb.	13,580	11,328	25,556	11,757	
Mar.	18,307	18,199	20,178	8,822	
Apr.	17,068	17,926	21,018	14,317	
May	15,595	13,926	14,820	11,357	
June	14,919	15,654	19,581	15,296	
July	10,068	27,582	13,522	15,499	
Aug.	8,591	14,934	16,581	13,070	
Sept.	9,423	17,298	11,793		
Oct.	11,862	13,064	19,836		
Nov.	10,685	16,224	14,164	****	
Dec.	10,809	23,277	14,607	****	
Voor	150 999	206 027	919 997		

#### Canada's Nickel Output

(Dominion Bureau of Statistics)

	(	In Ton	s)	
	1953	1954	1955	1956
Jan.	12,517	12,765	14,387	14,985
Feb.	10,662	11,874	13,375	14,997
Mar.	12,268	13,619	15,544	15,504
Apr.	11,841	13,015	15,011	14,431
May	11,610	13,458	15,352	15,203
June	11,687	13,269	14,835	14,492
July	11,801	12,901	14,530	15,125
Aug.	11,911	13,428	14,825	14,852
Sept.	12,031	13,521	13,734	
Oct.	12,469	14,323	14,411	
Nov.	12,764	14,159	14,290	
Dec.	12,122	14,947	14,881	****
Year	143,693	161,79	175,173	

METALS, NOVEMBER, 1956

#### Canadian Copper Exports (Dominion Bureau of Statistics)

of 2,000	lbs.)	
JanAug.	July	Aug.
27,059	6,562	2,945
16,631	4,493	1,682
184	100	84
557	557	1
8,926	1,334	1,061
760	78	117
1		1
105,918	13,599	14,710
	8,477	8,905
6,119	784	280
37,689	4,113	
	224	
5 11	1	3
9,589	772	1,396
8.330	627	647
	JanAug.  27,059 16,631 184 557 8,926 760 1 105,918 60,643 6,119 37,689 1,456 11 432,977 9,589	16,631 4,493 184 100 557 557 8,926 1,334 760 78 1 1  105,918 13,599 60,643 8,477 6,119 784 37,689 4,113 1,456 224 1 1 1  132,977 20,161 9,589 772

#### Canadian Zinc Exports (Dominion Bureau of Statistics)

(In tons of 2,000		
JanAu	— 1956 — g. July	Aug.
Ore (zinc cont.) 134,115		16,577
United States 117.369		12,743
Belgium 3,443		1.913
France 1,921		1,921
Norway 5,071		1,001
U. Kingdom 6,31		
Slab zinc 105,668		13,070
United States 61.18		8,421
Argentina 1,378		877
Brazil 13	)	
U. Kingdom 41,603		3.574
Korea 261		198
Hong Kong 50		130
Taiwan 53		
India 1.120		
Total Exports:		
Ore and slabs. 239,783	47 490	00 047
Zine scrap,	47,430	29,047
dross, ashes. 3,663	2 1.141	487
United States. 40		36
Belgium 2,200		293
Germany (W.) 9'		200
Netherlands 630		
Italy 5		
India 11		* * *
France 15		150
France 130	D	158

#### Canada's Nickel Exports

(Dominion Bureau of Statistics)

(In To	nal	
(III IO	1955	1956
January	14,421	15.121
February	13,915	13,940
March	13,564	16,219
April	16,083	14,448
May	14,761	14,729
June	16,296	16,403
July August		11,079 18,470
September	14,638	
October	13,589	
November	13,073	
December	14,749	

METALS, NOVEMBER, 1956

#### Copper Imports and Exports by Principal Countries

	<del>- 1956 -</del>	
IMPORTS	July	Aug.
U. S. (blist., s.t.) .29,106	21.003	22,391
(ore, etc., s.t.). 8,515	10,982	17,755
(ref., s.t.) 14,683	16,782	17,373
Denmark 53	100	169
France (crude)	814	
(refined)14,101	14.513	11.384
Italy 7,670	6.772	
Germany (W.) 22,706	16,493	
Netherlands 814	2.015	
Norway 325	300	
Sweden 5,112	3,156	
Switzerland 2,326	3,557	2,436
U. K. ((l.t.)39,957	33,268	33,08
India* (ref., l.t.). 2,023 EXPORTS		
U. S. (ore and		
unref., s.t.) 627	664	
(ref., s.t.)15,147	9,251	
Canada (ref., s.t.) 10,985	13,599	
Finland‡ 221	5	
Germany (W.) 5,259	4,642	* * *
Norway 1,274	808	* * *
Sweden 1,602	1,106	
U. K. (l.t.) 2,549	3,978	2,60
Turkey† 2,508		
No. Rhodesia (ref.		
& blist., l.t.) * 29,758	29,401	25,63

British Bureau of Non-Ferrous Metal Statistics.
 Includes copper alloys.
 Includes old.

#### U. K. Copper Exports

(British Bureau of Non-F Statistics) (In tons of 2,240		Metal
JanSept		Sept.
(Gross Weight)		
Copper		
unwrought,		
ingots, blocks,		
slabs, bars, etc. 20,976	2,605	2,100
Plates, sheets,		
rods, etc13,653	1,778	1,279
Wire (including		
uninsulated		
electric wire) 36,888	3,426	
Tubes 7,428	824	751
Other copper		
worked (incl.		
pipe fittings) 1,009	221	
Total79,954	8,854	10,271

#### Canadian Lead Exports (Dominion Bureau of Statistics)

(In tons of 2,000		
JanAug.	- 1956 July	Aug.
Ore (lead cont.) 30,131	10,581	4,604
United States 19,677	3,232	2,064
Belgium 6,385	3,280	2.540
Germany (W.). 4,069		
Refined lead48,641	9.695	4.712
United States 10,009	741	1.126
Cuba 1		
Venezuela 44		
U. Kingdom33,102	8.148	2.044
Japan 5,248	728	1.442
Taiwan 75	75	
Other countries 162		†100
Total Exports:	-	
Ore and refined 78,772	20.276	9.316
Pipe and tubing 12		1
Lead scrap 158		3
mentanana		
† To Uruguay.		

#### French Copper Imports (American Bureau of Metal Statistics)

(In M	etric Ton	s) - 1956	
-	JanAug.	July	Aug.
Ore (gross			
weight)	2,656		
Morocco	2,656		
Crude copper			
for refining			
(blister, black			
& cement)		814	
Belgium	102		
Germany		1	
Belg. Congo	3.251	813	
Refined		14.513	11.384
United States		3,078	2,165
Canada		462	457
Chile		700	435
Peru		100	100
Belgium	-	4,891	3.498
		492	751
Germany (W.)		134	102
Norway		102	303
Sweden			
U. Kingdom		330	15
Belg. Congo		3,386	2,268
U. of S. Africa.	521		
Rhodesia-			
Nyassaland		1,072	
Other countries	70		25

#### French Zinc Imports

(American Bureau of Metal Statistics)
(In Metric Tons)

(441 24)	ctire ron	1956 —	
	JanAug.	July	Aug.
Ore (gross			
weight)	205,915	20,315	33,916
Canada			3,200
Peru	10,187	1,224	1,960
Belgium	818		
Germany (W.)		500	1,662
Greece	3,442		1.172
Italy	12,347	2,189	2,528
Netherlands	304		
Norway			
Spain		2,084	4.831
Yugoslavia			2,620
Algeria	42,064	5,600	7,729
Morocco		8,698	5,097
Tunisia	8,819		1,518
Belg. Congo .	5,373		
Australia		* * *	1,599
Burma	500		
Other countries	303	20	
Slabs, bars,			
blocks, etc	7,700	407	542
Mexico	130		
Belgium	6,835	255	442
Germany (W.	400	152	
Italy	. 280		100
U. Kingdom	. 2		
Algeria	. 53		

#### French Metal Exports

(American Bures (In M	letric Tons	)	
	JanAug.		Aug.
Lead			
Ore (gross			
weight)	. 200	66	9
Pig lead:			
Non-argenti-			
ferous	. 6.355	38	84
Antimonial lead		34	55
Zinc			
Slabs, bars.			
blocks, etc	. 76		52
Copper			
Crude copper fo	r		
refining (blist			
black and ce-			
ment)	. 375	59	9

#### Nonferrous Castings

#### MONTHLY SHIPMENTS, BY TYPE OF METAL

(Bureau of Censu	s — Thousa	inds of Pot	inds)	
Alu-		Mag-		Lead
minum	Copper	nesium	Zinc	Die
1951 Total515,131	1,197,443	30,825	487.996	25,936
1952 Total518,979	1,009,910	34,857	408,353	20,941
1953 Total658,022	990,496	34,517	521,253	20,444
1954 Total607,764	834,557	25,572	474,741	18,396
1955				
March 78,958	92,149	2,572	71,811	1,537
April 73,049	84,183	2,633	71,595	1,614
May 71,691	85,008	2,399	63,735	1,530
June 68,473	90,476	2,367	66,569	2,045
July 55,033	65,816	1,920	47,928	1,684
August 64,864	87.206	2,176	62,677	1,904
September 67,170	39,600	2,478	62,030	1,924
October 72,197	91,192	2,302	71,689	1,789
November 75,065	90,345	2.325	75,099	1,896
December 75,275	88,287	2,255	70,950	1,817
Total833,058	1,011,748	27,892	781,254	21,045
1956				
January 74,152	89,767	2,959	68,050	1,598
February 73,096	91,706	2,977	66,584	1,636
March 73,785	96,085	3,046	65,760	1,644
April 67,880	90,679	3,140	58,274	1,910
May 65.786	89.198	3,001	59.205	1,919
June 58,189	78,921	2,949	47,775	1,883
July 52,955	60,926	2,810	42,227	1,551
August 61,528	77,619	3,049	52,321	2,112

#### Copper Castings Shipments

BY TY	PE OF CAS	TING		
(Bureau of Census)	(T	housands of	Pounds)	
		Permanent	;	All
Total	Sand	Mold	Die	Other
1951 Total	1,075,437	69,883	12,516	39,607
1952 Total1,009,910	910,862	63,865	8,259	26,924
1953 Total 990,496 1954	888,369	61,316	10,077	30,734
Total 834,557	751,804	48,849	6,480	27,394
1955	07 500	4 500	044	0.040
February 75,253	67,768	4,598	641	2,246
March 92,149	83,149	5,649	742	2,609
April 84,183	75,903	5,152	654	2,474
May 85,008	76,064	5,513	764	2,667
June 90,476	80,869	5,840	739	3,028
July 65,816	59,138	3,998	691	1,989
August 87,206	77,721	5,322	844	2,413
September 89,600	80,481	5,603	692	2,824
October 91,192	82,958	4,513	727	2,994
November 90,345	80,934	5,807	743	2,861
December 88,287	78,327	6,368	713	2,879
Total1,011,748	907,852	63,041	8,541	31,408
January 89,767	80,116	6.135	799	2,717
February 91,706	82,244	5.888	727	2,847
March 96,085	85,894	6,299	782	3,110
April 90,679	81,333	5 ×35	732	2.789
May 89,188	80,155	5,398	751	2,854
June 78,921	70,260	5,052	755	2,854
July 60,926	55,027	3,193	506	2,200
August 77,619	70,479	3,805	904	2,431

#### Nickel Averages

# Electro, cathode sheets, 99.00%, f.o.b. refinery, duty included (Cents per pound) 1953 1954 1955 1956 Jan. 58.62 60.00 64.50 64.50 Feb. 60.00 60.00 64.50 64.50

Feb.	60.00	60.00	64.50	64.50
Mar.	60.00	60.00	64.50	64.50
Apr.	60.00	60.00	64.50	64.50
May	60.00	60.00	64.50	64.50
June	60.00	60.00	64.50	64.50
July	60.00	60.00	64.50	64.50
Aug.	60.00	60.00	64.50	64.50
Sept.	60.00	60.00	64.50	64.50
Oct.	60.00	60.00	64.50	64.50
Nov.	60.00	60.98	64.50	
Dec.	60.00	64.50	64.50	
Av.	59.885	60.46	64.50	

#### Platinum Averages

#### N. Y. MONTHLY QUOTATIONS (Dollars per Troy Ounce)

	1953	1954	1955	1956
Jan.	91.50	91.40	81.00	106.30
Feb.	91.50	91.00	78.16	104.34
Mar.	91.50	87.88	78.00	104.23
Apr.	91.50	85.50	77.94	103.92
May	91.50	85.50	77.50	105.23
June	92.81	85.50	78.33	106.50
July	94.00	85.50	81.78	106.50
Aug.	94.00	85.00	84.59	105.76
Sept.	92.50	85.50	91.96	105.50
Oct.	92.50	83.62	94.60	104.85
Nov.	92.50	81.07	103.11	
Dec.	92.15	80.64	106.58	
Av.	92.496	85.72	86.12	

#### **Prompt Tin Prices**

#### (Straits, Open Market, N. Y.) Monthly Average Prices

	(Cent	s per	pound)	
	1953	1954	1955	1956
Jan.	121.50	84.84	87.628	104.768
Feb.	121.50	85.04	90.75	100.586
Mar.	121.415	91.24	91.065	100.524
Apr.	101.07	96.238	91.41	99.145
May	97.387	93.51	91.38	96.853
June	92.933	94.24	93.64	94.488
July	81.826	96.55	96.825	96.131
Aug.	80.69	93.381	96.456	98.924
Sept.	82.275	93.536	96.256	103.559
Oct.	80.897	93.00	96,075	105.716
Nov.	83.26	91.099	97.882	
Dec.	84.693	88.571	107.75	
Av.	95.787	91.77	94.73	

#### Monthly Tin Production at Longhorn Smelter

(From Concentrates)

	(In tons	of 2,240	pounds	)
	1953	1954	1955	1956
Jan.	4,000	2,700	2,402	1,754
Feb.	3,400	3,008	2,505	1,704
Mar.	3,850	3,559	2,353	1,802
Apr.	3,750	3,006	2,103	1,803
May	3,100	2,054	1,604	2,001
June	3,000	1,205	851	9531/2
July	3,000	NIL	950	NIL
Aug.	2,600	2,002	1,749	1,453
Sept.	2,700	2,404	1,751	1,349
Oct.	2,751	2,404	1,803	1,654
Nov.	2,750	2,404	1,803	
Dec.	2,750	2,404	2,453	
Total	37,651	27,150	22,327	

#### Quicksilver Averages

#### N. Y. Monthly Averages Virgin, Dollars per 76-lb. Flask

	1953	1954	1955	1956
Jan.	214.88	189.60	324.68	
Jan.	214.00	189.00	324.08	277.88
Feb.	207.37	190.00	324.68	270.29
Mar.	199.92	201.63	322.61	261.40
Apr.	197.90	221.36	318.14	267.22
May	196.50	251.20	306.62	267.675
June	193.42	273.46	286.98	260.69
July	192.21	287.40	268.22	256.06
Aug.	190.42	290.71	255.18	256.00
Sept.	187.04	314.08	263.70	256.00
Oct.	184.62	329.50	279.02	255.92
Nov.	186.00	321.17	282.50	
Dec.	188.38	319.96	282.27	
Av.	194.89	265.84	292.90	

METALS, NOVEMBER, 1956

#### Primary Aluminum Output, Shipments and Stocks

	(U.	S. Departme	nt of Interio	or)		
	Stocks	•	Sold	Sold or Used		
	of month	Production short tons	Short	Value f. o. b. plant	end of month short tons	
1955				•		
July	12,630	132,669	128,961	55,822,814	16,338	
August	16,338	133,551	136,472	59,965,645	13,417	
September	13,417	130,606	134,125	60,205,054	9,898	
October	9,898	134,655	128,116	57,924,207	16,437	
November	16,437	133,689	135,953	61,464,364	14,173	
December	14,173	140,748	139,901	63,319,738	15.020	
1956						
January	15,020	140,394	135,598	\$61,362,549	19,816	
February	19,816	132,763	135,505	61,284,856	17,074	
March	* * * * *	145,895	143,729	65,043,396	19,240	
April	19,240	144,726	149,854	70,479,739	14,112	
May	14,112	150,800	153,014	73,940,389	11,898	
June	11,898	145,726	140,225	67,775,239	17,399	
July	17,399	151.624	134,098	64,858,158	34,925	
August	21025	92,406	90,614	44,519,556	36,717	
September	36,717	132,316	121,854	60,104,570	47,179	

# Aluminum Wrought Products PRODUCERS' MONTHLY NET SHIPMENTS (Bureau of Census — Thousands of Pounds) Rolled Extruded

Total	Plate, Sheet. & Strip	Structural Shapes, Rod, Bar & Wire	Shapes Tube Blooms & Tubing	Powder, Flake, & Paste
1952 Total1,924,750	1.085,699	443,546	347,542	47,963
1953 Total2,286,865	1,368,165	422,946	451,922	44,732
1954 Total2,088,439	1,165,090	357,229	518,070	46,255
1955				
March 234,730	128,432	31,051	71,981	3,266
April 227,939	123,293	29,835	72,017	2,794
May 234,309	125,176	30,979	75,371	2,813
June 255,701	136,420	35,306	74,792	3,035
July 210,222	113,305	27,070	62,918	2,379
August 250,036	141,400	29,413	67,904	3,039
September 244,135	134,240	32,973	67,407	2,926
October 248,806	138,328	30,554	71,456	2,926
November 245,256	137,109	31,656	67,798	2,658
December 242,993	138,592	31,802	64,159	1,837
Total2,805,500	1,542,368	365,391	812,311	35,854
January 251,772	142,049	34,008	67,499	2,118
February 240,999	134,077	33.727	65,261	1,901
March 232,767	128,432	30,972	63,482	1,947
April 260,610	143,859	37,971	69,639	3,316
May 264,378	147,613	39,900	68,106	2,215
June 240,415	132,510	33,438	65,600	2,119
July 247,895	139,571	35,346	64,249	2,736
August 248,457	141,400	32,413	66,315	3,039

# Aluminum Castings Shipments (Bureau of Census) BY TYPE OF CASTING

(Thousands	of Pounds)		Permanent		All
	Total	Sand	Mold	Die	Other
1951 Total	515,131	193,378	160,011	151,465	10,277
1952 Total	518,979	194,616	146,883	169,732	7,748
1953 Total	658,022	214,553	200,025	239,330	4.114
1955					
February	66,869	13,579	24,319	28,234	737
March	78,958	16,019	29,029	33,229	682
April	73,049	14,041	28,028	30,208	772
May	71,691	14,235	25,597	31,243	616
June	68,473	14,920	24,682	27,939	932
July	55,033	11,716	21,006	21,656	655
August	64,864	14,916	22,267	27,004	576
September	67,170	14,870	23,075	28,532	693
October	72,197	14,485	25,135	31,741	836
November	75,065	14,327	26,267	33,852	619
December	75,275	15,291	25,031	34,347	606
1955 Total	833,058	171,757	298,115	354,804	8,282
1956					
January	74,152	15,861	24,528	33,253	510
February	73,096	15,560	23,963	32,949	624
March	73,785	16,597	22,816	33,965	407
April	67,880	14,732	20,718	31,782	648
May	65,786	15,600	19,669	29,814	703
June	58,189	13,448	19,067	25,027	647
July	52.955	12,398	16,388	23,491	678
August	61,528	13,100	18,067	29,674	687
METALS, NOVEMBER, 1956					

#### Virgin Aluminum

Virgin	99%	Deli	vered
Monthly	Ave	rage	Prices

(Cents per pound)

	1953	1954	1955	1956
Jan.	20.173	21.50	22.90	24.40
Feb.	20.50	21.50	23.20	24.40
Mar.	20.50	21.50	23.20	24.60
Apr.	20.50	21.50	23.20	25.90
May	20.50	21.50	23.20	25.90
June	20.50	21.50	23.20	25.99
July	20.962	21.50	23.20	25.90
Aug	21.50	22.12	24.26	26.70
Sept.	21.50	22.20	24.40	27.10
Oct.	21.50	22.20	24.40	27.10
Nov.	21.50	22.20	24.40	
Dec.	21.50	22.20	24.40	
Av.	20.928	21.785	23.655	

#### Magnesium Wrought **Products Shipments**

(Bureau of Census)

	(	Thousa	nds of	Pounds)	
		1953	1954	1955	1956
Jan.		1,313	972	1,776	2,118
Feb.		1,601	1,136	1,648	1,901
Mar.		1,601	1,136	1,947	1,946
Apr.		1,708	892	1,756	2,279
May		1,699	1,129	1,836	2,462
June		1,192	1,312	1,686	2,302
July		1,589	1,032	1,437	2,002
Aug.		1,433	1,111	1,742	2,949
Sept.		1,254	1,183	2,159	2,810
Oct.		1,409	1,002	1,667	3,049
Nov.		1,314	1,243	1,955	
Dec.		919	1,673	1,577	

#### Cadmium Averages

Total .16,885 13,743 21,186

N. Y. Monthly Averages Cents per lb. in ton lots

	1953	1954	1955	1956
Jan.	193.00	200.00	170.00	170.00
Feb.	200.00	170.00	170.00	170.00
Mar.	200.00	170.00	170.00	170.00
Apr.	200.00	170.00	170.00	170.00
May	200.00	170.00	170.00	170.00
June	200.00	170.00	170.00	170.00
July	200.00	170.00	170.00	170.00
Aug.	200.00	170.00	170.00	170.00
Sept.	200.00	179.00	170.00	170.00
Oct.	200.00	170.00	170.00	170.00
Nov.	200.00	170.00	170.00	
Dec.	200.00	170.00	170.00	
Av.	199.44	172.50	170.00	

#### Steel Ingot Production

•	(A	merica	n Iron	and S	teel Ins	titute	e)		Calculated
	OPEN HE		BESSE	MER er cent		RIC er cent	TOTA	cent	weekly produc- tion, all
Period	Net tons	of	Net tons	of	Net tons		Net tons	of	companies
		apacity		pacity	CS	pacity		acity	
	82,846,439		3,523,677	65.5	6,797,923	82.6	93,168,039	85.8	1,782,097
	100,473,823		3,855,705	83.2	7.280,191		111,609,719	94.9	2,140,578
1954 Total	80,327,494	73.6	2,548,104	53.2	5,436,054	52.0	88,311,652		
June	8.764.430	96.6	283,544	72.0	698,493	78.6	9,746,467	94.1	2,271,904
July	8,232,535	88.1	268,348	66.1	600,063	65.5	9,100,946	85.3	
August	8,600,612	91.8	298,872	73.5	694,961	75.7	9.594,545	89.7	2,165,812
September	8,829,266	97.6	307,171	78.2	745,888	84.1	9,882.325	95.7	2,308,954
October	9,369,704	100.0	330,150	81.2	801.196	87.3	10,501,050	98.2	
November		100.8	306,674	77.9	799,480	89.9	10,247,398	99.0	
December	9,390,000	100.5	292,000	72.0	786,000	85.8	10,468,000	98.1	2,368,000
Total	105,342,886	95.6	3,319,088	69.3	8,338,592	77.2	117,000,566	93.0	
January	9,676,151	101.4	323,235	79.5	828,845	86.6	10,828,231	99.3	2,444,296
February	9,043,064	101.3	296,543	78.0	779,388	87.1	10,118,995	99.2	
March	9,795,263	102.7	310,060	76.3	819,465	85.7	10,924,788	100.2	2,466,092
April	. 9,437,945	102.2	306,388	77.9	779,452		10,523,785	99.7	
May	. 9,370,167	98.2	297,990	73.3	822,219	86.0	10,490,376		
June			282,846	71.9	773,546	83.6	9,721,436	92.1	
July					292,012	30.5	1,622,163	14.9	
August			189,564	46.6	719,759	75.3	8,122,597	74.5	
September			286,978	72.9	792,885	85.7	10,422,659	98.8	
October	9.824.000	103.0	330,000	81.2	878,000	91.8	11.032,000	101.2	2,490,000

Blast	Furnace	Output	
Diast	I utiliace	Output	

#### (American Iron and Steel Institute)

*****		net tons		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		(Sh
		Ferro-				Total
	Pig	manganes		%	1950	
	Iron	& Spiegel	Total	Capacity		.1,461,6
194						.2,101,6
Ttl. 194	Yr. 58,507,169	702,561	59,209,7	30 90.1		.1,925,1
	Yr. 60,135,941	712,899	60,848,8	10 90.2	1953 1954	.1,829,2
	Yr. 53,613,779	592,564	54,206,3	43 76.8	May	94,6
Ttl.	Yr. 64,810,272	673,896	65,484,1	68 91.5	June	
195					July	. 75,8
Ttl. 195	Yr. 70,487,380	745,381	71,232,7	51 98.3		. 89,59
Ttl.	Yr. 61,528,665	629,926	62,158,5	91 84.2	Sept	. 88,3 . 87,0
Total		855,038	75.842.7	59 95.5	Nov.	87,6
195		000,000	,,.			
June	4,683,629	40,521	4,724,1	50 70.0	Dec	. 93,5
July	4,590,076		4,626,1	84 66.6		.1,184,0
Aug.	4,529,291		4,567,0		1955	
Sept.			4,461,8		Jan	98,2
Oct.	4,937,436		4,983,6			
Nov.	8,204,446		5,256.9			106,4
Dec.	5,526,720		6,586,5		Mar	127,4
Total		568,735	58,688,1	17 71.6	Apr	. 120.0
Jan.					36	100 4
Feb.	5,729,404		5,784,6			
Mar.			5,442,7		June	
	6,406,902		6,463,9		July	. 97,8
Apr.			6,384.6		Aug	. 126,4
May	6,758,286		6,804,9		Claret	1400
June	6,495,050		6,543,8			
July Aug.	6,329,393		6,390,5		Oct	
Sept.	6,529,580		6,601,4		Nov	. 152,3
Oct.	6,905,280	59,993	6,703,3 6,965,2		Dec	. 158.9
Nov.	6,686,649		6,698,9			.1,530,6
Dec.	6,887,667		6,958,5			. 1,000,0
Total			77,800.8		1956	
1956			,500,0		Jan	. 158,6
9-					99 1	4000

6,602.817 7,149,443 6,924,563 6,920,942 6,434,589 1,107,009 5,142,217

# 6,985,945 6,539,199 7,083,877 6,860,833 6,873,102 6,387,608 1,089,518 5,100,669 6,873,064 63,619 63,618 65,566 63,760 47,840 46,981 17,491 41,548 59,584 GALVANIZED SHEET SHIPMENTS

(Am	erican ir	on & St	eel Instit	ute)
	(	Net Tons	)	
	1953	1954	1955	1956
Jan	201,472	169,086	211,101	269,464
Feb	183,503	167,433	199,408	272,997
Mar	204,995	180,198	238,649	291,193
Apr	196,656	203,312	239,001	266,728
May	189,765	201,671	285,962	272,741
June	184,862	200,456	246,940	279,058
July	. 185,896	214,349	205,211	
Aug	187,741	207,113	241,863	276,048
Sept	. 194,257	209,765	269,020	256,803
Oct	208,705	209.498	260,010	*****
Nov		195,190	255,692	
Dec	176,375	205,561	261,640	*****
	-		-	-

Total ..2,290,868 2,362,632 2,864,497 ..... · Combined with August figures

#### Steel Castings Shipments (Bureau of Census)

(Sho	rt Tons)	For Own
Total	For Sa	le Use
1,461,66	7 929,19	2 374,217
2,101,60	4 1,507,41	3 594,191
1,925,11	6 1,476,38	2 448,767
1 820 27	7 1 200 01	6 421 220

2		1,829,277	1,290,016	431,330
	1954			
8	May	94,610	70,596	24,014
5	June	100,022	72,881	27,141
9	July	75,848	53,207	22,641
8	Aug	89,590	66,792	22,798
	Sept	88,359	64,722	23,637
2	Oct	87,085	64,004	23,081
5	Nov	. 87,659	64.812	22,847
	Dec	93,547	69,843	23,704
6		1,184,096	880,158	303,938
	1955	1,104,000	000,200	000,000
0 8 5 9 4 6	Jan	98,238	75,044	23,194
5	Feb	100 100	80,729	25,701
4	Mar.	100 100	98,926	28,534
6	Apr	120,053	92.237	27,816
	3.5	122,465	92,713	29,752
5		133,887	102,457	31,430
6				
6.4	July	97,875	71,170	26,705
4	Aug	126,406	96,290	30,116
7	Sept	140,843	107,622	33,221
8	Oct	145,674	110,409	35,265
3	Nov	152,381	116,908	35,473
6	Dec	158,982	122,201	36,781
6		1,530,694	1,166,706	363,988
	1050			

July

Feb. ...

Mar. ...

Apr. ... May ...

June ...

Jan. ... 158,618

165,398

170,045

163,708 178,227

#### ... 164,661 Aug. ... 159,831 127,001 SHIPMENTS of TIN-TERNE PLATE (American Iron & Steel Institute) (Net Tons) Hot Dipped Hot Dipped Rectorytic

123,343

128,598

130,839

125,015 142,025

129,147

96,350

39,206

38,693 36,202

35,514

21,634

		Hot Dipped		Electrolytic	
Jan.		1955 82,874	1956 81,034	1955 335,682	1956 402,627
Feb.		88,189	77,877	344,467	404,193
Mar.		94,434	133,257	419,574	598,129
Apr.		89,492	138,556	441,194	654,575
May		125,579	70,282	481,805	354,204
June		130,603	84,371	520,305	466,060
July		76,473		291,405	*
Aug.		111,482	81,005	441,201	408,903
Sept.		116,295	72,400		396.588
Oct.		60,355		249,790	*****
Nov.		59,269		240,503	
Dec.		65,363	****	263,087	*****
Total	1	,100,762		4,503,637	

\* Combined with August figures

Steel Ingot Operations (Percentage of Capacity as Reported

by American Iron & Steel Institute)

week										
Begin	ning 1953	1954	1955	1956						
Jan.	2 98.2	75.4	81.2	97.6						
Jan.	9 99.3	74.3	83.2	98.6						
Jan.	16 99.7	74.1	83.2	99.0						
Jan.	23 99.4	75.6	85.0	100.4						
Jan.	30 97.7	74.4	85.4	99.3						
Feb.	6 99.7	74,4	86.8	99.1						
Feb.	13 99.1	74.6	89.1	98.8						
Feb.	20 99.4	73.6	90.8	98.8						
Feb.	27100.3	70.7	91.9	99.9						
Mar.	5101.3	69.3	92.9	100.0						
Mar.	12101.5	67.6	94.2	100.6						
Mar.	19103.1	68.1	93.7	99.5						
Mar.	26 97.1	69.1								
	2 98.9		94.4	99.6						
Apr.		68.0	95.3	97.7						
Apr.	9 98.8	68.0	94.6	100.9						
Apr.	16101.0	68.6	94.6	100.2						
Apr.	23100.3	68.7	95.6	100.5						
Apr.	30100.2	69.4	96.6	96.4						
May	7100.3	70.9	97.2	95.2						
May	14 99.8	71.8	96.9	95.3						
May	21100.3	71.2	96.4	97.3						
May	28 99.6	70.2	95.8	96.3						
June	4 97.9	73.2	94.7	96.7						
June	11 96.8	72.3	96.0	93.4						
June	18 96.8	72.1	95.0	93.0						
June	25 91.8	65.8	71.1	84.9						
July	2 92.8	60.0	85.9	12.3						
July	994.7	64.3	91.2	12.9						
July	16 94.4	65.3	91.0	14.6						
July	23 92.6	64.2	90.7	17.0						
July	30 94.0	64.0	86.9	16.9						
Aug.	6 95.2	64.0	89.4	57.5						
Aug.	13 95.9	61.8	90.2	87.5						
Aug.	20 93.4	63.5	90.6	95.8						
Aug.	27 90.5	64.0	93.4	97.0						
Sept.	3 89.2	63.0	93.8	98.7						
Sept.		66.3	95.7	100.6						
Sept.		68.7	96.1	100.6						
Sept.		70.4	97.0	101.3						
Oct.	1 95.2	71.0	96.7	101.8						
Oct.	8 96.3	72.8	96.5	100.9						
Oct.	15 95.0	73.6	98.9	101.4						
Oct.	22 94.6	74.5	100.0	101.2						
Oct.	29 93.0	76.4	99.4	101.3						
Nov.	5 92.3	77.2	99.6	100.6						
Nov.	12 90.7	79.3	99.2	100.2						
Nov.	19 86.8	80.3	100.1							
Nov.	26 87.5	81.4	97.6							
Dec.	3 86.7	82.5	100.1							
Dec.	10 84.3	81.5	100.3							
Dec.	17 64.1	72.4	96.9							
Dec.	24 75.7	77.6	95.7							
Dec.	31	• • •	• • •							
	METALS NOVEMBER 1956									

Nov.
Dec.
Total
1956
Jan.
Feb.
Mar.

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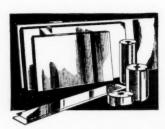
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